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Farm Department.

Conducted by J. H. Brown, who lives on his farm at Climax, Mich., which is conducted as the Michigan Farmer Experiment Farm. All correspondence for this department should be sent to Climax, Mich.

THE EDITOR'S FARM NOTES.

HARVEST ITEMS.

We have just finished cutting oats and find the grain of inferior quality. The weather conditions have favored the farmers in Southern Michigan in securing all grain crops so far, but the drouth has nearly ruined the oat crop in some places.

Our Dawson's Golden Chaff wheat is heavier than last year and much better than the White Clawson sown on an adjoining plot. The Golden Chaff has stiffer straw and stands up better. The heads are larger and seem to be better filled.

EFFECT OF FERTILIZERS.

The plots upon which commercial fertilizer was sown show no larger growth in straw or size of heads, but we shall let the threshing machine make a final decision. One and one-half acres sown with fertilizer and the same area sown to wheat without them will be kept separate and the yield reported after threshing.

VALUE OF TOP-DRESSING.

One-half of the twenty-acre field was lightly top-dressed (about eight loads to the acre), with stable and yard manure last fall, worked into the soil with a cutaway harrow. The remainder of the field was left without any top-dressing. The portion top-dressed is so much heavier that the difference in growth of grain is easily noticeable forty rods away. Many times, when hauling and spreading the manure last August on the plowed ground, we regretted that we could not evenly spread about four loads per acre, and thus cover the whole field. With a patent manure spreader this could be done, but it is impossible to do it by hand spreading.

One reason why we like the top-dressing is because we almost invariably secure a good growth of clover, even in a dry season. The fertility in the surface soil allows the young clover plants to become more deeply rooted before the midsummer drouth comes on. We find the young clover, in patches, on the portion sown to commercial fertilizers, looking somewhat better than on adjacent portions where no fertilizer was sown. But the portion top-dressed with manure looks best of all. We shall try even thinner spreading this season.

CORN AFTER CORN.

We dislike sowing our corn ground to wheat, though we have practiced such a plan for nearly twenty years. We seldom sow until after the corn is cut, and the young wheat usually fails to secure the fall growth necessary to pass the rigorous winter weather. This spring we planted last year's corn ground over again. Failure of clover seeding in another field made it necessary to change our regular rota-

tion. The corn this season is growing finely, and, as we covered the field with stable manure, we see no reason why we should not secure as abundant a yield of corn as last year, other conditions being equal. We have seen, in traveling through the state, several fields in which corn had been grown for several successive seasons, and good yields were claimed where plenty of manure was applied.

OUR CHECK-ROWED CORN.

We were disappointed in not being able to secure a photo of a patch of our corn when it was from one to two feet high, in order to show how well the planter checked off the hills. We

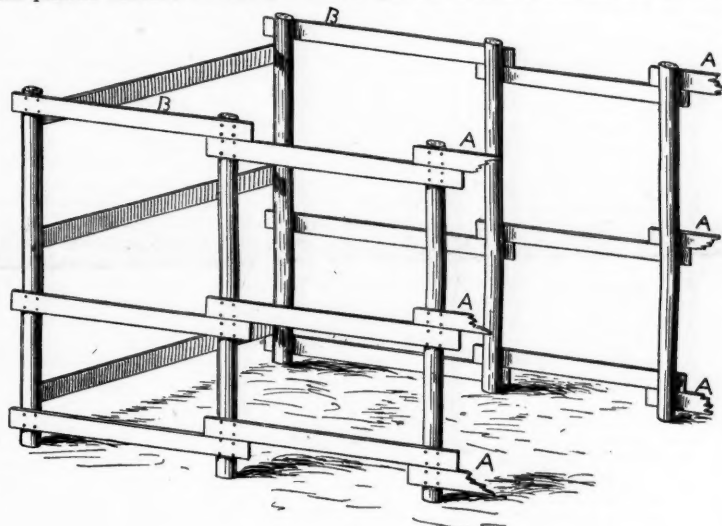


FIG. 1.

have not seen a better job of check-rowing anywhere, but we are not quite satisfied, and expect to do still better another season. The cross rows, even over hills and depressions, are perfectly straight. The check heads were not perfectly adjusted for the speed of the team and height of neckyoke end of the pole, so that many hills checked over slightly. Still this gave very little trouble in cross cultivation with a two-horse riding cultivator. Verily

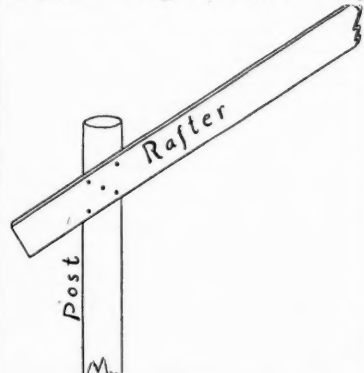


FIG. 2.

our wire check-rower is a complete success.

THE MACKINAC EXCURSION.

We receive frequent inquiries as to whether the editor of this department will go on the excursion. We have arranged to do so. As to "reduced rates to Detroit" queries, we will state that a party of ten persons can secure round trip tickets on any road to Detroit, good for ten days. But all these

tickets must be purchased at the same time, and the going portion used on the same train.

FARMING ON THE "THUMB."

Recently we made a trip into Sanilac and Huron counties, which form a portion of the so-called "Thumb" of Michigan. We rode out to the farm home of R. A. Brown, one of our practical correspondents, and a prominent farmer of that section. Mr. Brown has a productive and level farm of 150 acres. He is progressive, a good stock breeder, and very successful. Wheat, oats and peas form the principal crops grown, and our friend has an immense growth of straw, but has not threshed

the rafters. The poles are 18 feet long and set two feet into the ground. As the ground was not quite level, we used a plumb and spirit level and found no difficulty in doing a good job. Commencing at one corner, a white oak pole, from 8 to 10 inches in diameter, was set up in its proper hole and temporarily stayed by 2x6 girts, the 12-foot girts to lap by the posts, then another pole raised and set into the second hole, and stayed in like manner. The poles were about 11 feet apart, or just the right distance for the 12-foot girts to lap by the posts and nail securely without sawing. (See Fig. 1.) Three girts were spiked on the first two poles, one at the bottom, one in the center and another near the top. A sharp axe was used to hew off the bark and make a good face for spiking each girt on the poles. We commenced at the highest corner and set the spirit level on each girt, thus quickly placing and spiking them into position. The girts and rafters are of hemlock, light and stiff. Both are 2x6 inches in size, while the nail ties are 2x4 inches. For this barrack we have four poles on each side, also four more, 26 feet long, running through the center to support the ridge.

Having insufficient barn room for storing hay and wheat, these two barracks will pay for themselves each season. There is an immense loss each season, if at all rainy, where hay and wheat are stacked in the open air. Two years ago we lost enough wheat, or rather had enough damaged, to pay for one-half the material used in this barrack. It seems to us that it would pay thousands of our farmers in this State to erect some such cheap barrack, when necessary to stack in the open air.

DURABILITY OF BARRACK.

As to the durability of such a cheap

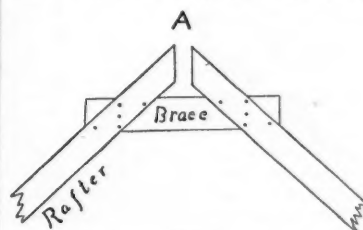


FIG. 3.

structure: No. 20 wire nails were used to hold the frame together, same as in the hay barrack erected some eight years ago. The hay barrack still stands plumb and stiff, though a miniature cyclone last August tore down four large apple trees surrounding it. These nails never pull out of the posts; in fact, we tried to pull off a girt and the nail heads pulled through the girt itself. Braces may be put on when needed, at any time when empty, and as the posts decay at the bottom, the sides should be boarded up, if not before, as this gives the necessary rigidity to the entire structure.

Fig. 1 shows how we set up the poles and nailed on the girts without sawing a single girt. At A is indicated the broken ends of girts supposed to

yet. Farmers in that section are just commencing to cut oats. The heaviest growth of oats we have seen anywhere in Michigan this season is found in the "Thumb." As the land is so level farmers plow their fields in very narrow strips, leaving dead furrows to assist in surface drainage in a wet time. Tile drainage is almost impracticable in this land.

We were surprised to find so much heavy clay loam soil in this section. Many fine, productive farms abound all along the line of the F. & P. M. railroad from Sand Beach to Port Huron, a distance of seventy miles. The farm buildings, especially some of the barns, are commodious and substantial affairs. Very little corn is grown, except for fodder purposes. What we saw had made a rapid growth and looked as though it might mature by Sept. 10.

POLE BARRACK FOR WHEAT AND CORN STOVER.

We this year stacked wheat in our barrack for the second time. Last fall it was filled with corn stover, and we expect it to pay for itself every season in holding these two crops. It is 22x32 feet, and 16 feet to the eaves, with steep roof made of good stock boards having 3/4x1/2-inch grooves on each upper edge. The upper side of those boards is also dressed.

The only cutting and fitting in constructing the frame is when setting up

run across to the next pair of poles to the right.

SETTING UP THE RAFTERS.

There are two ways, but we prefer to spike the lower ends above the plates, and alongside the top of each pair of posts, as shown in Fig. 2. The upper end of each post may be then sawed off even with the upper edge of the rafter. A good plan, in setting up each pair of rafters is to leave the ridge open, as shown at A in Fig. 3. A short brace may be tacked on temporarily, until each pair of rafters is raised and securely spiked to the side posts. Next cut and insert a 2x6 (or even a 1x6) piece, made or spliced long enough to run the whole length of the barrack. When in position below A, and resting on the brace, knock one end of each brace loose and toe-nail the end of each rafter into the "ridge-board." This gives more rigidity to the rafters while completing the roof.

For the Michigan Farmer.

THE HAY-LOADER A VALUABLE AID.

I note with interest and approval what C. P. Reynolds writes about the use, general distribution and economy of the hay-loader upon the farm. I have used the loader perhaps longer than has Mr. Reynolds, and therefore hope that he will pardon me if I add a few suggestions to his excellent and practical paper.

He says truly that the hay-loader is comparatively unknown, and its economy little understood, even by our best farmers. I wish to emphasize what he says about handling the hay without breaking the leaves and blossoms when very dry. The fact is, that the loader breaks the hay less than is done in the ordinary handling in cocking from the windrow. I must confess that I used the loader for years before I fully learned how to handle it to the best advantage. The first process is in raking the hay. Never take from the swath. Rake the same as you would for cocking in heavy windrows.

It was a long time before I found that the best work was done when the machine was working at full capacity. In raking, go back and forth, on one side of the field only. Make your windrows straight, and trip the rake quickly to make the rows, which should be heavy and as narrow as possible. Curve the rows at each end to correspond to the circle made by the wagon and loader in turning from one row to another. In this way you can get the whole row. Note what Mr. Reynolds says about curing in the windrow. When the top of the swath is partly dry the rake turns it over and the conditions are soon nearly perfect.

In loading, I use a boy (hired at \$7 per month) to drive. He stays in the field and drives for the full set of wagons. One man loads from the loader easily, with a little practice, in the average time of eight minutes. Our way is to let the load almost entirely alone until filled to the top of loader behind. This leaves a steep incline of hay to the forward end of the rack, down which the column of elevating hay will push itself more than half way, until the top of the load is level. If more hay is needed the team makes short stops, enabling the man on the load to fill up the center well. My only criticism of the matter in Mr. Reynolds' paper would be in making it more emphatic in comparing two men's ability to pitch on a load as quickly as it can be elevated with the loader. I think it would be lively work for two men to pitch on a row of cocks as fast as the team on the wagon could walk, without stopping. It could not be done. The loader does this easily. The economy is in the saving of three men every day. But this is not all. The hay-loader's greatest economic value is in making it possible to secure hay rapidly, when cured, with little labor, and in season.

As to durability, this is a slow-motion machine. The driving wheels are larger than ordinary truck wheels, while the reel that drives the elevator is smaller, hence the motion is slower than that of the wagon. My loader shows no wear, bids fair to last a lifetime, and I have never spent a penny for repairs.

Now, Mr. Editor, I give you credit for being very level-headed in your advice to farmers, as a rule, but suppose that you spend five days in drawing your hay. Your two pitchers have cost you at (\$1.75 per day, with board) \$19.10. The interest on investment in loader, same as I use, is \$2.50; the wear of the machine in very small.

But, as I have said, the greatest benefits are in the very rapid storing of the hay, when conditions are right or storms threaten. Our loader has often been run at the rate of a load every seven minutes. This could not be done, perhaps, without the peculiar facilities we have in our hay barns for unloading. Our racks have two 1x6 boards across the hind end, raised just high enough to clear the loader in turning. They should be on every rack, and nearly or quite the width of the rack.

In summarizing, I will say that the hay-loader is next in economic value to the mowing machine and hay-rake, and it should be in the hands of every farmer who can afford the former machines. I am led to believe that our editor has criticized the hay-loader without having given it his usual careful consideration, or else he has had experience with a very poor machine, or has taken the word of some very poor farmer.

L. D. WATKINS.

(We are glad to get friend Watkins' testimony concerning the use of the hay-loader. He is one of the most progressive and practical farmers in the State, and, with his son, manages a large and productive farm. If any farmer needs such a loader, our friend does, and he has a good one and knows how to manipulate it. If we had thirty to fifty (or more) acres of grass to cut, we should certainly use one. But for the small farmer (like ourselves) we doubt whether there would be any profit in buying such a machine, and especially for use on rolling ground and in small fields.

We hope to hear from others, during the coming year, concerning this matter. We know the hay-loader is a success, so far as the machine itself is concerned.—Ed.)

For The Michigan Farmer.

MARKETING HAY.

So much complaint is heard from farmers who sell hay about its weighing less when delivered than when baled, that it is a good plan to take down on a piece of paper the weight of each bale when loading. By doing this one can foot up each load before going to market, and then if it does not agree with the purchaser's figures the mistake can be rectified before some other farmer has unloaded.

One mistake that some farmers have made in this county is the baling of hay before it is sold. Hay balers have gone through the county charging a certain sum for doing the work, which leaves one free (so they say) to dispose of his hay when and where he pleases. The trouble lies in the fact that after the hay is baled it colors to a certain extent on the outside, and when a buyer calls to examine it he is sure to condemn it, and is not very likely to buy it. As a rule buyers are more particular when they know that a man has something to sell and is anxious to dispose of it. When a farmer has anything to sell and says he is in no hurry about it, and if it is hay and is not baled, everything goes to show that he has not been in any great haste, and before the buyer leaves he is sure to make an advance over his first offer, which sometimes proves to be all the thing is worth.

But I like to have a buyer offer all he can afford to pay the first thing, and if I find that he has not paid (in case that I sell) all that he ought, I never sell to him again, and I never ask a man to raise his price, for if he does not understand his business, who does?

ELIAS F. BROWN.

Hillsdale Co., Mich.

(We agree with you in this matter, though we are convinced that thousands of farmers make a sad mistake in selling a pound of hay off the farm, whether baled or not. Sooner or later the best farms in the country become impoverished from following the plan of selling off so much vegetable matter that is grown upon the farm. We feed nearly every pound to our stock and return the manure to the soil. We used to sell hay and straw, but we would not do it again, in a raw state.—Ed.)

Farmers Break the Buggy Monopoly.

It is claimed that for years buggy manufacturers have secured exorbitant prices for their goods, but recently, through the combined assistance of the farmers of Iowa, Illinois and other states, SEARS, ROEBUCK & Co., of Chicago, have got the price of open buggies down to \$16.50; top buggies, \$22.75; Top Surries, \$43.75 and up-wards, and they are shipping them in immense numbers direct to farmers in every state. They send an immense Buggy Catalogue free, postpaid, to any one who asks for it. This certainly is a big victory for the farmer, but a severe blow to the carriage manufacturers and dealers.

The Dairy.

We have a complete Dairy and Farm Creamery in constant operation on the Experiment Farm at Climax, Mich. This is personally conducted by J. H. Brown. All dairy correspondence should be sent to Climax, Mich.

THE EDITOR'S DAIRY NOTES.

MAKING GRANULAR BUTTER.

"Can so-called granular butter be made without purchasing a full outfit of creamery apparatus? Or is the creamery alone capable of doing such fine work?"

We wish we could personally take a small lot of properly ripened cream, churn it, and show some of our dairy friends how easily granular butter can be made, even at this time of the year.

We have seen plenty of poor butter this summer in various portions of the State, and the most of it came from farms where but two or three cows were milked.

These cows gave little milk, and the cream was held until a large enough quantity was collected for a good-sized churning. Usually the cream was over-ripe and spoiled when turned into the churn.

As we have previously stated in these columns, the best way to secure uniformly good butter, under such circumstances, is to churn oftener, if possible, say every second day. As soon as the cream is separated, whether taken from open pans, deep setting, or by use of the separator, cool it down by setting the can of cream into cold water right from the well.

Twenty-four hours before you wish to churn, raise the temperature of the cream to about 65 degrees, in warm weather. This will allow it to develop enough lactic acid to ripen sufficiently in from 15 to 20 hours for exhaustive churning. Be sure to add no fresh cream to the lot undergoing the ripening process, but let it all be of the same degree of ripeness. If fresh cream is added, it will leave a large per cent of fat in the buttermilk.

You may think your churn is too large for such small churnings, but if you use a barrel, box or swing churn, you can churn more exhaustively with the small lots of cream. More effective work can be done with the churn less than one-quarter full. Cream swells more or less after the churn is started. Concussion is what is needed, and you should never fill your churn more than one-third full to start with.

In order to make good butter, strive to have good cream, well ripened and of a nutty flavor, to put into the churn. By all means do not keep the cream until it spoils. This is the main trouble at this time of the year. If you must churn rotten cream, feed it to the pigs before churning. However, we sometimes doubt the propriety of feeding such stuff to the pigs.

Churn the cream as cold as possible. If you use a separator you can lower the temperature to 54, and even to 50 degrees, with profit to yourself, though the pigs may lose thereby. If your cream is from the open pan or deep setting, do not try to churn at such a low temperature. By experimenting you may find, however, that you can churn at a temperature somewhat lower than you have previously considered practical and profitable.

Either buy a small Babcock milk tester, or have samples of your whole milk, skimmed and buttermilk tested occasionally. This will show you that it does not pay to make rich buttermilk for the pigs, at present prices. By testing the buttermilk frequently you can determine at how low a temperature it is practical to churn for exhaustive results. As soon as the butter shows signs of coming, keep sharp watch and stop the churn at the right stage. The great majority of farm butter-makers churn too long after the butter comes. It should not be allowed to gather. It should look like brown, granulated sugar, after the buttermilk has been drawn off.

A hair sieve eight inches in diameter is the best thing to use in drawing off the buttermilk and washing the butter. If the churn is stopped as soon as the butter is in fine flakes or granules, pull out the plug, holding the hair sieve underneath to catch any particles of butter that come out. This sort of sieve does not allow the butter to stick.

We wash the butter in two waters usually. This takes out nearly all the buttermilk, and it requires less working afterwards. The butter is now in fine shape for salting. We sometimes

salt in the churn, but usually on the worker. The butter granules are now in shape to allow the salt to permeate all the moisture surrounding these granules. This salts the butter. But not a single grain of butter contains any salt.

The butter should be worked as little as possible. We simply press the whole together solidly and put into pound prints. In packing in a jar, only a small amount should be put in at a time. Pack this down solidly with a potato masher, or what is called a follower. Then turn off the brine that has been pressed out, before putting any more butter in the jar. We can put all our butter into pound prints about as fast as it could be packed into jars.

DAIRY SHORTHORNS.

The London Field says the British Dairy Farmers' Association has opened a new class in its annual October show for registered Shorthorns. The prizes offered are \$50, \$25 and \$15 in the inspection classes, and \$75, \$50 and \$25 in a milking competition. The Field, referring to this change in the policy of the Association, says:

"Breeders of Shorthorns have been palpably remiss of late years in keeping their breed to the front in a dairying sense. Although we hesitate to say that the Shorthorn is not as good a dairy cow to-day as she has ever been at any former time, the charge can fairly be leveled at her supporters that they have not recently been displaying their wanted or needed attention to keep her prominently before the public at dairy exhibitions. Fresh inducement is now offered to them to keep the dual-purpose cow in her proper place in a dairying as in a beef-producing capacity, and grave responsibility will rest upon them if they neglect to take full advantage of it. Other breeds, extremely useful for dairying purposes, but which for the ordinary requirements of the farmer and the exigencies of the climate cannot really compare with the well-tried Shorthorn, are rising conspicuously into prominence, and, although she has many virtues on her side, it would be hard to say what a neglect of the dairy show-yard might mean to the Shorthorn. Let breeders see to it that the cosmopolitan breed is creditably represented in the Royal Agricultural Hall at next dairy show, as it is sure to be at the Smithfield meeting two months later."

This movement on the part of English dairymen should be followed by American breeders of Shorthorns in an effort to have the dairy qualities of the breed developed and recognized on this side of the Atlantic. There is no doubt but that the record made by the Shorthorns in the dairy test at the Columbian World's Fair has had a strong influence in restoring the popularity of this great combined breed among the general farmers of this and other states.

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From our Special English Correspondent.

THE FARMER'S BOAR AND HOW TO MANAGE HIM.

HINTS FOR BEGINNERS.

It is frequently said that the bull is half the dairy herd. With equal truthfulness it can be said that the boar is half the swine herd. We may select a sow, and she may prove to be a disappointment. Often it is so when a farmer first begins to go in for a system of breeding and selection, not knowing the heredity of former ancestors. You must have good stock to begin with. Unless you have a good sow there will always be trouble. The evil results of an inferior boar can be seen in the first litter, and at once this class of an animal should be got rid of. Much of the success of a boar depends, in addition to his feeding, upon the feed and care that have been given to him while young.

The great bulk of dairy farmers, however, are not so situated as to be able to make a personal selection from the herds of good breeders. In many instances this is perhaps a good thing, as the number of pure-bred pigs of great beauty and form lead farmers astray from intelligent selection, and in the end it is best to leave the choice to the integrity of the breeder. I have always found it a good plan to wait until about the end of the autumn before purchasing, as it is not advisable to have a boar very long before you intend to use him. Every pig breeder should know the points of a good pig, or at all events have an ideal which he will be aiming at. The marks of different breeding are always plainly visible. Watch for a narrow back, a drop behind the shoulders, a short girth round the heart, walking on the dew claws, or needlessly long, coarse, bony legs, large, long, coarse head and ears, narrow over shoulders and loin, tucked up ham and flank; in fact, any indication of an unprofitable feeder. The buyer should know exactly what he requires, and write to the breeder of pure pigs, stating the objectionable and the desired points. He will see that you understand your business, and this will cause him to take a pride in his reputation, and fill your order to the best of his ability with a type of boar that for a series of years will lead to a steady improvement. Do not have an ideal color, and sacrifice everything else for color. Remember that the slaughterman erases color and spots. It is a good bacon pig he asks for, and not a fancy colored animal. Never confine yourself to a particular color when ordering a boar. So long as he is not just the opposite color from that which purity of type demands, you are all right.

Where shall we keep this boar? is often a perplexing question to dairy farmers. If pig breeding is to be carried on at a profit, this is a question that has got to be dealt with. As an important industry on a farm, it should be established on a proper basis. There are many different ways to manage the boar. I have tried, and seen many ways, and have long since arrived at the conclusion that it is safest, and entails the least work and vexation, to have a permanent yard or small paddock for the boar. The fence, of course, must be pig-proof. For protection from the weather, erect a shanty-like pen, eight feet by eight, and high enough to permit of entrance when cleaning it. In order to guard against waste of food, there should be a feeding floor, at least ten feet in length, and wide enough to permit of the boar standing on it in front of his trough. It is best to have the feeding trough and floor at one corner of the yard, so as to be more secure from being rooted up. If natural drainage can be secured all the better, but if not, means must be provided to keep the yard healthy and clean. If one or two trees are growing in the yard, to give shade in summer, this will be a great advantage. Pigs like comfort, and unless it is provided do not thrive well.

By having the boar confined to his enclosure, a farmer will never be disappointed in having some sows in pig when not wanted, as is often the case when boars are permitted to run at large, and, perhaps, travel of his own free will from farm to farm, for miles around. In a pen he is not teased and

fretted by sows, which is detrimental to his development.

The boar should have full rations of food, calculated in its nature to grow and develop him, yet not to fatten him. As long as the season will permit, he should never suffer for want of green and succulent food. It always adds materially to his growth and health. Neither should he ever know his want of a regular supply of salt, ashes, or charcoal. Everything, in fact, that will add to his comfort, vigor, growth, and health, will be found a paying investment in his future offspring.

Selection, food and care are more powerful in developing possible characteristics than most of us, perhaps, realize. Our own management must go hand in hand with the improvement of the herds. In conclusion, above all, farmers should not forget to keep the boar thoroughly under subjection, because if he proves a worthy sire, he too, like the sow, will add improvement to the herd, that too often falls in immature breeding.

Recollect also, that the service of the boar must be restricted. It is often the excessive service of the boar that shows its detrimental effects in the offspring, no matter how well he is bred or cared for.

AGRICOLA.

THE OZARK HOG.

Mrs. G. H. Watson, of the Ozark region, sends a description of the native hog of that country to a contemporary, and those who have seen the southern hog in his native wilds will recognize the picture she draws of this peculiar animal. Mrs. Watson says:

"People are bringing into this section good Berkshires, Poland-Chinas, Chester Whites and Jersey Reds to a limited extent, but the razor-back is the prevailing hog yet. He is small, lean and wiry, one-third head and one-half of that snout. They are turned out into the woods in the spring, if they chance to be in during the winter, and it's root pig or die, and indeed, most of them are a sorry, discouraged looking set of pigs, sure enough. They look as if they were too tired to root (though built for it) even to keep from dying. They have to be three years old before they can be fattened, but their flesh is much sweeter and better flavored than that of the northern lard hog, being much like wild game. When the bitter acorns fall the hogs eat so many that they often die. The acorns are very wormy. If the hogs are put in a pen and fed on dry feed, given no drink for a week or more, fed turpentine or ashes, they will recover. Cholera is not prevalent here. This country is covered, where not cleared, with oak and some walnut and hickory; ought to be a paradise for hogs."

The Ozark hog is a fine representative of the razor-back family. His flesh should certainly have a gamey flavor, for he eats anything and everything that is eatable, from snakes to wormy acorns. And although there is no hog cholera in the Ozarks, this hog, which requires three years to grow, dies frequently from other causes—and we don't think the country would lose much should they all die. The introduction of the improved breeds will soon drive them out, or into the hands of such farmers as are only fit to keep that class of hogs.

STOCK NOTES.

The reports from packing points show that the run of hogs is largely in excess of last year. Since the first of April there has been a million and a quarter more hogs packed this year than last.

At four principal points—Chicago, St. Louis, Omaha, and Kansas City—there were 456,000 more cattle marketed in 1892 than at the same points in 1897. The average price in 1892 at Chicago was \$4.25 for 1,200 to 1,500-pound beef steers, and \$4.55 in 1897. The high-water mark for cattle marketing in recent years was 1892, with 6,442,397 at four points, and the low-water mark 1895, when only 5,537,536 were handled at the four markets. In 1890 there was a gain of about 140,000 head at the four points, and 1897 made a gain of about 338,000 over 1895, but was still 466,580 short of 1892.

Dr. James Law reports an interesting case of poisoning by lead, which he recently observed. He found several sick cows, suffering from nervous disorders, in a herd from which one had but recently died. An examination of the dead animal revealed nothing, but a glance at the new tub silo gave the reason. It had been painted inside with a thin coat of lead last summer, the knots being coated again. The acetic acid, developed in the ensilage, had dissolved some of the paint, forming the poisonous sugar of lead, lead acetate. By prompt treatment of the

sick animals they were saved, but one in the herd, apparently well, succumbed suddenly, making the second victim. Coal tar would have been safe and quite effectual in covering the wood.

A decline in the price of canned meats (corned and roast beef) has taken place the past week. The reduction is 10 cents per dozen on one-pound cans, 15 cents on two-pound, 25 cents on four-pound, \$1 on six-pound, and \$2 on fourteen-pound. Packers are finding supplies accumulating after an unprecedented business, which recently compelled an advance in values. The government demand has fallen off almost entirely, as supplies for some time ahead have been purchased. The demand from foreign markets has also fallen off lately. The lessened demand for canned meats will undoubtedly affect values of common cattle, such as are denominated canners, which have ruled relatively higher the past five months than for years.

"Farmers' Bulletin" No. 73, of the United States Department of Agriculture, says: "Whoever would raise hogs without disease (and this is necessary to obtain the highest profit), must get rid of the notion that the hog is naturally a filthy animal—that filth is less distasteful and unhealthy to him than to the steer or horse, and that it is impossible, because of the nature of the animal, to surround the hog with sanitary conditions. Filth is a prolific source of disease among all animals; and because the hog is brought into contact with the most filth, there is the most disease among swine. Filth opposes the health and thrift of swine, just as it opposes the health of horses or man. The first step in growing hogs without disease is to keep filth away from them—to give them clean food, clean drink, clean quarters and clean shelters."

Prof. Behring, the discoverer of vaccination against diphtheria, it is reported, has brought to light a method by which it is claimed tuberculosis in animals is cured. Behring has succeeded in producing from tubercle bacilli a poison about twenty times as strong as that found by Koch, and has produced an antitoxin, or counter-poison, from eighty to one hundred times as effective as Koch's tuberculin. Animals injected by degrees with the poison were gradually rendered immune, or resistant to the disease, and from the blood of such animals there was extracted an antitoxin, which is capable of rendering other animals altogether incapable of "taking" the disease. Experiments now in progress at the Royal Veterinary College, Berlin, are aimed to render the discovery useful and available to stock-breeders and cattle-owners throughout the world.

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SHEEP FARMING INCREASING FERTILITY.

From our Special English Correspondent.

There is an old Swedish proverb, which, literally interpreted, has thus been rendered: "Sheep have golden feet, and wherever the print of them appears the soil is turned into gold." Surely those who professed themselves unable to understand how the Earl of Leicester obtained four paying crops without manure, after a lengthy period in which the land had been in grass and fed continuously by sheep, must have forgotten it, or have been practically inexperienced as to the extent fertility is induced and heightened year by year by practical farming, and no abstraction of produce beyond what the animals appropriate to their own frames.

No doubt this increase of fertility is always more or less according to the system of sheep management carried out. If, for instance, a large breeding flock be kept without any auxiliary food being given either to the sheep or lambs, either before or after weaning, they having to get their living solely from sheep walks, and the natural produce of the soil, their droppings would be nothing like so rich as when large quantities of cake, corn or meal be given to both, that the lambs may attain early development. There are, of course, a great many systems of sheep management. The sheep breeders of England who have pedigree flocks adopt high feeding, and so do those farmers who fatten lambs. Moreover, the system has lately become very popular to feed non-pedigree flocks much better than formerly. Two flocks are divided out after lambing according to the sexes of the progeny. In one are all the wether lambs with their dams, in the other the ewes and she-lambs.

The motive for the separation is that there may be high feeding of the wether lambs. They have troughs with artificial food in them placed outside the hurdle breach, and probably their dams may be allowed small quantities of extra food likewise, that they may give richer milk. After weaning, the wether lambs are not only removed to the best piece of grass or green crop, but are fed with cake or meal to make good weighty carcasses as soon as possible.

Very little consideration will be requisite to prove that when liberal feeding with auxiliary food prevails, there must naturally be far greater enhancement of fertility than when the flock has never been allowed any extra sustenance whatever except what is derived from grass, should purely pastoral farming be followed, and the wether lambs and draft ewes be sold off every autumn lean. There have been those who have declared that when such a system of low farming is pursued, the bone, muscle, sinews, etc., sold off from the farm every year in its crop of ewe lambs and draft ewes would impoverish its pastures and sheep walks of mineral properties almost to the same extent as pastures are deteriorated by dairy cows when all the milk produced goes off without there being any return by cake or corn being put into the mouths of the animals, or otherwise by direct manuring. In either case, there must be large abstractions of phosphates in the bones of lean sheep sold from the farm to almost an equal extent to that from the poor dairy pasture, in which case the phosphates go off in the milk.

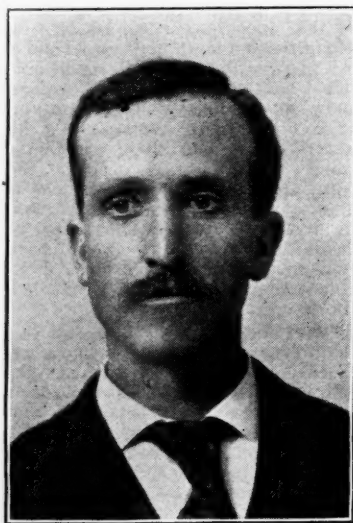
The Earl of Leicester stated that he did not find his arable pastures fall off in actual produce even after from twelve to sixteen years of laying down, and that his only motive for breaking them up again was that sheep always do better on new grounds than old ones. More likely, therefore, the Earl's system of management, if not possibly high was generally good, so that minerals were imparted continually to the soil through the mouths of the animals and the droppings they left behind. Of course, grass lands can be manured quite as well through the mouths of stock, even to the imparting of mineral fertility as by direct manuring. The late Mr. Charles Randall had some poor meadows which he manured every winter by folding sheep over them which were entirely fed by food from extraneous sources. His system

was that of cutting up straw into chaff and, after damping it, incorporating with the heap a hot soup consisting of cereal meals and linseed infused into boiling water. After fermenting twenty-four hours it was fed to the sheep in troughs, and they did far better than others did on turnips, while the poor meadows produced a heavy crop of grass the ensuing summer.

AGRICOLA.

THE NATIONAL ASSOCIATION'S SECRETARY.

We give below a portrait of the new secretary-treasurer of the National Shropshire Record Association, Mr. S. J. Weber, of Middleville, Mich. Mr. Weber was appointed by the Executive Board to succeed Prof. H. W. Mumford, whose time was so taken up with other business that he did not have sufficient to devote to the affairs of the Association, and therefore felt compelled to resign this important office. Mr. Weber was unanimously chosen to succeed him. He is a young man, only 31 years of age, but has been breeding Shropshires for the past twelve years, having a breeding flock of some sixty head at present. Mr. Weber is also a breeder of Shorthorn



cattle, Poland-China hogs and fancy poultry. He has nothing but pure-bred stock on his farm. He was born in Waterloo, Ont., came to Michigan some years ago, and has lived on a farm most of his life. If hard, earnest work secures success, Mr. Weber will achieve it, and his hustling qualities will undoubtedly prove of much value to the National Association in extending its usefulness, and in building up public interest in the United States and Canada in the breed it is designed to represent and encourage. We bespeak for Mr. Weber the aid of every Shropshire breeder who wishes to see his favorite breed occupying the highest possible position to which its merits entitle it on the farms and ranches of this continent.

A CORRECTION.

In the last issue of The Farmer appeared an article on Cotswold sheep, taken from the work on "Domestic Sheep," by Henry Stewart, with some remarks by the editor. A portion of these comments were omitted by the printer through an error, and we give them entire so that what we intended saying will be better understood:

The above history and description of the Cotswold is generally in accordance with the facts. The Oxford Down is a notable example of the value of the Cotswold cross on the Down breeds. It came from mating Hampshire ewes with Cotswold rams, and was certainly a valuable addition to the Down breeds, securing great size of carcass and rapid growth, with the black face and legs regarded by Englishmen as a guarantee of quality in the mutton. But crossed with the Merino we do not think the fleece is of as fine quality and luster as comes from a union of the Lincoln and Merino. The latter cross gives a fleece in the lambs which is used to replace that of the Angora goat, which usually sells much higher. The Cotswold was one of the very earliest of the English improved breeds introduced into this country and Canada, and it has held its ground pretty well against all comers.

FLOCKS AND FLEECES.

Reports from three different sections of this State show that flocks have recently suffered from the attacks of sheep-killing dogs. As between dogs and sheep, it does not seem possible there should be any dispute as to which will have to go.

Feeders are likely to be high this coming fall. There will be a disposition to hold a good part of the increase to build up flocks. This will be all the more certain if wool advances this fall, as every well-informed man thinks it will. It will therefore be best to secure feeders as early as possible before the rush commences.

Official reports from South Africa show that 1,461,761 sheep and 411,000 goats have been lost through rinderpest and drouth in Cape Colony alone, and that the eastern, middle and north-western portions of that district have suffered enormous losses from heat, drouth and starvation. In several portions of South Africa the drouth has been so severe that there has been no lambing, and flocks in which there were formerly thousands of sheep now have only hundreds.

The Trans-Mississippi Exposition management offers \$6,000 in prizes for winning sheep at Omaha. In addition to this handsome sum, the American Shropshire Association offers \$600, the Cotswold Record Association \$500, the Lincoln Association \$210, the Oxford Down Association \$300, the English Oxford Down Association \$50, the Hampshire Down Association \$150 and the Continental Dorset Club \$50 in special prizes. To the above will probably be added specials by the American Southdown Association, and also some specials for Rambouillet Merinos.

In spite of the big unconsumed stocks of wool in this country and of complaints of unsatisfactory conditions in the consuming industry, the prices of new clips in the West have been advanced by speculation above an equality with the quotations current in the Eastern distributing centers. The Westerners are in close touch with the prosperous agricultural communities, and their optimism with regard to the business outlook is a natural sequence of this intimacy. They may be wrong about wool, but they are clearly in the right in their predicate of improving general business prospects.—Philadelphia Record.

The demand for sheep is not going to be confined to any special breed. There are conditions and requirements in a country as large as the United States which demand a variety in breeds of sheep as well as in other crops. The big Lincoln, Cotswold or Leicester will never do well on the arid plains of the Southwest, and yet they hold a strong place in the Northwest, and in the middle agricultural States. The Merino can live under conditions which would prevent success with the large breeds, because they require less to sustain them, and are natural foragers. These same Merinos would never be selected to produce good mutton lambs.

The Riverina (Australia) Record says: "Mr. S. McCaughey is a levathan among squatters and the king of sheep owners, the largest shearer of sheep in the whole world. Including freehold and leasehold he has 3,000,000 acres of land. His big station in the Riverina he calls a mere stud farm. It is only a trifle of 40,000 acres of freehold and 5,000 of leasehold. The rest of his land is on the Darling, where he has two stations, Tooralie and Dunlop. A million of acres are near Hughendon, in Queensland. In the last drought of eighteen months in the west his losses in sheep and lambs totaled no fewer than 360,000 sheep. All the same, he can still boast that he shears a million a year. This is the record, not only for Australia, but for the world. Mr. McCaughey can claim to be the greatest single sheep owner on earth.

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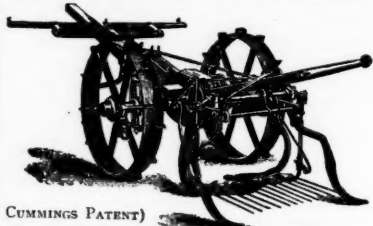
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The Horse.

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THE RANGE HORSE FOR CAVALRY.

The use of the range horse for cavalry purposes in Cuba and Porto Rico, which islands will undoubtedly have to be occupied for a long time after peace is declared, is being discussed. It strikes us that these hardy animals would stand the climate there better than the average northern horse. They will stand exposure and short feed better, for those are conditions natural to them. They are very enduring, and would probably carry a man as far as a larger horse in a rough country such as much of these islands are. The most serious objection is to get them broken so that they can be used as remounts. The system of breaking pursued on the range, while it may subdue them, generally makes them difficult to manage, and requiring constant care on the part of the rider. If they could be furnished well broken, and with a disposition which would render them tractable, which would render them tractable, we think they would do excellent service. They could be had at a low price, and in any number desired. All the western and southwestern States could contribute such horses, and at prices which would be a great saving to the government.

For The Michigan Farmer.

HORSES FARMERS CAN BREED.

It requires good judgment and some little experience to breed salable horses in this age of invention and electricity. There will always exist a demand for horses in spite of all that is said about bicycles, trolley-cars and horseless vehicles. But the horses must be for a particular purpose, and the only successful breeder will be the man who will breed for some special use, and study the conditions of the business thoroughly. By reason of his surroundings, the farmer should be able to do this work more satisfactorily than most others.

In the first place there is a steady demand for good driving horses and good coach horses. These must both be high-class horses and not scrubs. A light driving horse that has go and metal to it, and yet not be a runaway at every chance it gets, is a kind of an animal in considerable demand. Good teams of driving horses that are matched in color, size and mettle are particularly desirable, and there are men scouring the country for just such teams. For the right kind of teams good prices can be obtained today. In fact, high-class horses have held up very well in price in the face of recent depression in the horse market. It is the scrub and inferior horses that have gone begging. When horse cars traversed our cities there was a pretty good market for these second-class animals, but now that the cars have gone the horses are a drug on the market.

Good solid coach horses, capable of a steady and moderate speed, stylish looking, and of a perfect match, probably stand second in demand just now. Many people are not going to give up their coaches for the bicycle or horseless carriage, and so long as they enjoy driving in their private coach, horses of this character will be in demand. A cross between the French coach and American trotting breeds generally produces animals best adapted to this trade. One need have little fear of not finding purchasers for all first-class coach horses, and at prices that are remunerative to the breeder. The market in the last five years has been weeded out pretty well of old scrubs, and it is in better condition today as a result.

Finally, we have farm and heavy draft horses. Some 15,000 farm horses are needed in this country and probably twice as many more draft horses for trucking and express business in large cities. These horses must be heavy, powerful, enduring, and the possessor of some mettle; that is, sufficient to give them fair gait. A slow horse has little usefulness. On the other hand trotters are not wanted. Horses that have some of the blood of the trotter in them, and some of the Percheron and Clydesdale, will probably give the most satisfactory results for this business. Breed intelligently, and for a purpose, and the horse mar-

ket stands open and ready for the farmer or breeder.

Ohio.

E. P. SMITH.

CARE OF THE HORSE.

Here is the Mark Lane Express' idea of how horses should be cared for:

The animals should be first watered, then fed, and while they are eating their corn the bed is turned up, the stalls mucked out, the feet picked out with the picker, and the soles, frogs and walls well washed with the water brush, the shoes being examined to see that they are firm and serviceable. Thorough grooming with brush, curry-comb, sponge and linen rubber.

Sick and idle horses require grooming as much as working animals do to keep them in health. If horses got more efficient grooming there would be fewer complaints as to 'surfeit,' pimples, blotches, hidebound, roughness and other things that affect the health and spoil the appearance of the animal, and there would also be less demand for alterative and 'condition' powders, which are generally rendered necessary through the skin becoming unhealthy owing to its neglected condition.

The cleaning out of the foot is an important point that is entirely neglected with most of our farm horses. Of course, when out at pasture it is not necessary, but where horses are in the stable continuously the feet should be looked after better than they usually are.

HORSE GOSSIP.

The sensational pacer of the year is Searchlight, 2:04 $\frac{1}{4}$. He looks capable of beating two minutes if he does not meet with an accident. He is only four years old.

Secretary J. W. Russwurm, of Highland Park, Detroit, is so well satisfied with the success of the recent trotting meeting that he has claimed dates for next season, the second week in July and the second week in September.

The latest idea in connection with the exportation of trotting horses is to take an American horse-shoe over with them. One has just made a contract to go to Vienna and shoe the horses which driver Wilson has in training.

At the Columbus meeting on Saturday of last week, Star Pointer, in a trial against the former record on that track, 2:01 $\frac{1}{2}$, made by Joe Patchen last year, paced the mile in 1:59 $\frac{1}{4}$, equaling his own best record. The track was not as fast as usual, and the time made was a great surprise.

"Hear the tinkling of the bells"—harness bells. Rubber tires, beside their other virtues, make less noise, and now we must have harness bells to let the unwary pedestrian know that a rubber-tired vehicle, drawn by a horse wearing rubber-padded shoes, is approaching. This is about the way the world wags. Stop the noise and then make a noise to let the world know the noise has been stopped.—Livery Stable.

Five of the get of Chimes have entered the 2:30 list this season. Three of them are trotters, and their records are 2:12 $\frac{1}{4}$, 2:13 $\frac{1}{4}$, and 2:16 $\frac{1}{4}$. Chimes, we presume, will be called a developed sire, as he has a record of about 2:30. He is undoubtedly the greatest sire of extreme speed produced by Electioneer. His fastest son is The Abbot, 2:08 $\frac{1}{4}$. The Abbot is now five years old, and is out of Nettle King, 2:20 $\frac{1}{2}$, by Mambrino King, the best son of Mambrino Patchen. The second dam of The Abbot is Nettle Murphy, by Hamlin Patchen, son of Geo. W. Patchen, 2:23 $\frac{1}{2}$; third dam was by a son of the thoroughbred horse, Kentucky Whip. The breeding of The Abbot is peculiar in this generation, as he has only one cross of the blood of Hambletonian 10, which he gets through his grandsire, Electioneer.

Veterinary Department.

CONDUCTED BY DR. W. C. FAIR.

Advice through this department is free to our subscribers. Each communication should state history and symptoms of the case fully, also name and address of the writer. The initials will only be given. When an answer is requested by mail it becomes private practice, and a fee of one dollar must accompany the letter.

Fleas.—Dog has fleas. I have tried some simple remedies. None of them do any good. W. K. Monroe, Mich.—Apply one part zenoleum to fifty parts water as often as found necessary to keep them off him.

Question.—I should like to know how much turpentine would be sufficient for a lamb weighing sixty pounds. I gave half a teaspoonful for three or four days with not very good results. D. V., Grass Lake, Mich.—One dram turpentine once a day given in not less than two ounces raw linseed oil.

Rubs Tail—Worms.—Young horse has a bad habit of rubbing his tail. What is the cause and how can I best prevent it? G. M., Grass Lake, Mich.—Wash his tail with soap and water, add one ounce kerosene to each two quarts of soap and water and apply three times a week. Give one dram sulphate iron twice daily.

Quarter Crack.—I have a good young road horse that has quarter crack on off fore foot. He is somewhat lame. How should he be shod? D. S., Hillsdale, Mich.—Lower his heels, cut through hoof at top of coronet at right angles to crack. Blister coronet with caustic balsam once every ten days. Stand him in wet clay when not in use.

Periodic Ophthalmia.—Seven-year-old mare has moon eyes. Part of the time her eyes are all right; at other times sore, sometimes one eye then the other. A. J. K., Coldwater, Mich.—Sooner or later your mare will go blind. Keep her in a dark place and give one dram iodine potash once a day. Foment eyes with hot water. Treatment in such cases is of a palliative nature and only relieves pain.

Vertigo.—Eight-year-old horse takes fits every few days. I usually bleed him in the mouth and he gets well. Can he be cured? I should like to keep him if you think him safe for road work. A. J., Manistee, Mich.—Your horse is not curable. Give him laxative diet, plenty salt and if in high flesh reduce him. I regard such horses unsafe. He should be used double if at all and for slow work.

Worms.—Yearling colt is thin, rough coated and does not grow. He has plenty feed, no grain but lots of grass. How can I start him growing. He was wormy during the winter. M. W., Lansing, Mich.—Give half a dram santonin, one dram powdered sulphate iron and one dram ground gentian once a day in feed until he commences to thrive. You had better feed him oats and wheat bran once a day.

OUR COMPLETE FAIR LIST.

The list below contains all fair dates we have been able to secure and is, we think, complete. At each of these we want at least one good agent and ask that requests be made at once as appointments will be made in the order requests are received, and agents waiting may not secure fairs they desire.

If you do not know of a Michigan Farmer agent who attends your fair, write to us and we will furnish free the supplies you need to attend same and allow you the regular agents' rates.

The work is not hard and it pays well. Now is the very best season of the year to begin subscription work, and we need a good, hustling agent in every locality. Send for terms and try the work; it will pay.

Midland, Midland Co.	Sept. 7-9
Escanaba, Delta Co.	Sept. 6-8
Coldwater Street Fair	Sept. 5-9
Cadillac, Wexford Co.	Sept. 13-16
Hudson, Lenawee Co.	Sept. 13-16
Ironwood, Gogebic Co.	Sept. 15-17
Plymouth	Sept. 13-16
Chesaning	Sept. 14-16
Adrian, Lenawee Co.	Sept. 19-23
Coopersville, Ottawa Co.	Sept. 20-23
Holland, Ottawa Co.	Sept. 20-23
Jackson, Jackson Co.	Sept. 20-23
Reed City, Osceola Co.	Sept. 20-23
East Jordan, Charlevoix Co.	Sept. 21-23
Gaylord, Otsego Co.	Sept. 22-24
Mayfield, Oakland Co.	Sept. 20-23
Albion	Sept. 20-23
Onkama, Manistee Co.	Sept. 20-23
Cedar Springs	Sept. 20-23
Marlette Street Fair	Sept. 20-23
Burt, Saginaw Co.	Sept. 20-23
Plint, Genesee Co.	Sept. 20-23
Sand Beach Street Fair	Sept. 20-23
St. Johns, Clinton Co.	Sept. 20-23
Owosso Free Street Fair	Sept. 20-23

Ann Arbor, Washtenaw Co.	Sept. 27-30
Caro, Tuscola Co.	Sept. 26-30
Evart, Osceola Co.	Sept. 27-30
Michigan State, Grand Rapids	Sept. 26-30
Hillsdale, Hillsdale Co.	Sept. 26-30
Vassar, Tuscola Co.	Sept. 27-30
Marquette, Marquette Co.	Sept. 27-30
Bad Axe, Huron Co.	Sept. 27-30
Flushing	Sept. 29-Oct. 1
Hadley, Lapeer Co.	Sept. 27-30
Redford, Wayne Co.	Sept. 27-30
Hastings, Barry Co.	Sept. 27-30
Stockbridge, Ingham Co.	Sept. 28-30
No. Branch, Lapeer Co.	Sept. 28-30
Mt. Pleasant, Isabella Co.	Sept. 27-30
Berrien, Berrien Co.	Sept. 30-Oct. 1
Roscommon	Sept. 29-Oct. 1
Marshall, Calhoun Co.	Sept. 27-30
Bancroft, Shiawassee Co.	Sept. 27-30
Howell Street Fair	Sept. 27-30
Rome Street Fair	Sept. 27-30

Charlotte, Eaton Co.	Oct. 4-7
Allegan, Allegan Co.	Oct. 4-7
Hart, Oceana Co.	Oct. 4-7
Imlay City, Lapeer Co.	Oct. 4-7
Ionla, Ionia Co.	Oct. 4-7
Caledonia	Oct. 5-7
Centerville, St. Joseph Co.	Oct. 4-7
Kalamazoo Street Fair	Oct. 4-7
Armada, Macomb Co.	Oct. 5-7
Berlin	Oct. 4-7
Cass City	Oct. 4-7
Fowlerville, Livingston Co.	Oct. 4-7
Mason Street Fair	Oct. 4-7
Brighton, Livingston Co.	Oct. 11-14

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*London accommodation. *19:05 am

EAST VIA PORT HURON.

*17:55 am Pt. Huron F. & P. M., north. *9:40 am

*2:05 pm Toronto, Montreal, New York. *2:00 pm

*1:20 pm Pt. Huron F. & P. M., north. *6:00 pm

*4:20 pm Pt. Huron and Int. stations. *9:15 pm

*10:40 pm Toronto, Buffalo, New York. *6:45 am

D. & M. DIVISION.

*6:55 am Saginaw, Muskegon, G. Rapids. *9:20 pm

*9:15 am Pontiac Suburban. *1:35 pm

*11:40 am Gd. Rapids, Gd. Haven, Chicago. *3:40 pm

*4:05 pm Saginaw, G. Haven, Milwaukee. *11:50 am

*5:45 pm Pontiac Suburban. *8:10 am

*8:40 pm Chicago via Durand (sleeper). *7:05 am

*8:30 pm / Mixed Gd. Rapids Int. stations. *7:05 am

Grange Department.

Our Motto:—"The farmer is of more consequence than the farm, and should be first improved."

Address all correspondence for this department to

KENYON L. BUTTERFIELD,
AGRICULTURAL COLLEGE, MICH.

News from Michigan Granges is especially solicited.

GRANGE CALENDAR.

The following is a schedule of dates arranged for Hon. Aaron Jones, Master of the National Grange, for August picnics in Michigan:

Branch Co., Gilead.....	Aug. 20.
Barry Co., " 22.	
Antrim Co., Easipoint..... " 23.	
Ionia Co., Ionia..... " 24.	
Washtenaw Co., Ann Arbor..... " 25.	
Kent Co., Silver Lake..... " 26.	
Berrien Co., Berrien Springs..... " 27.	

SOME RECENT ACHIEVEMENTS OF THE GRANGE IN MICHIGAN.

VI. TAXATION.—2.

The Michigan State Grange has always raised its voice against unjust taxation, but possibly the present agitation of the subject in Michigan can be traced back to about 1891, when the executive committee in its report to the State Grange discussed the over-capitalization of railroad corporations, and, as a remedy, suggested the following to avoid the continuance of this form of unjust taxation:

"We would empower and make it the duty of commissioners of railroads in the several States, or the Interstate Commerce Commission of the United States, to ascertain the present value of every railroad, by which we mean what it would cost to build and equip the road at the present time, equal in all respects to its present condition."

The Grange took no stated action on this question further than to accept the report, and in 1892 the executive committee reiterated its statements along the same line.

But it was in 1893 that the Grange first took up the subject of taxation as its leading measure. Worthy Master Horton in his first annual report to the State Grange used the following language:

"Year after year this question receives consideration before Granges, Farmers' Clubs, institutes, and legislatures. It has been discussed and resolved upon more than any other question before the people. All this, and a satisfactory solution not yet reached. It is the spirit of the law that all property, individual and corporate, shall pay its proportion of the public expense. To say that this is not the rule in application, is but speaking the truth. The burden is shared unproportionately and unjustly, and it is a proposition beyond contradiction that farmers pay vastly more than their share, occasioned by large amounts in other property and notably money at interest escaping taxation. If there is to be any discrimination in rates of assessments, this difference should be in favor of non-accumulative and depreciating property, which at the present time would certainly include farm lands and farm property, while found in the first of the list that should pay the higher rates on account of its money-earning value, should be money at interest, for no other class of property is so industrious and possesses such constant net earning power.

"Is it not strange that the people who are personally interested in a just apportionment of taxes and who constitute a very large majority of the taxpayers, should so quietly submit to the enactment and enforcement of laws in such a way as will permit the injustice we see on every hand?"

"It was a great mistake to have allowed the repeal of the mortgage tax law of 1891. Its foundation principles were based upon justice. It should have been amended and perfected so as to have made its intentions impossible of evasion. I believe the Michigan State Grange should place itself on record as favoring the enactment of a law with similar provisions and well guarded against misrepresentation or evasion by the unscrupulous.

"Taxes are necessary to the support of our many institutions of government, and he who by deception or

sharp practice shifts his just proportion of the expense over onto shoulders less able to bear it, is unloyal and unpatriotic to the country in which he lives and the civilization he enjoys."

In this language Brother Horton struck the key-note of the question of taxation, and from this time on the Grange has worked in season and out of season for tax reform.

The report of the proceedings for 1893 also shows that the State Grange had been instrumental during the previous session of the legislature in bringing about the passage of an Inheritance Tax law. The bill was introduced by Senator Doran, of Grand Rapids. The Grange legislative committee took it up and pushed it and the bill passed. Unfortunately, it was technically unconstitutional, but those difficulties can easily be remedied, and such a law would bring in, it is thought, at least \$200,000 per year.

In 1894 Worthy Master Horton again devoted a great deal of space in his report to the subject of taxation, and after discussing the difficulties and injustice of the tax system in Michigan, Brother Horton suggested a definite line of action in the following language:

"It has been found almost impossible to get statistics of exact situations upon which to base the consideration of this question. Supervisors' reports are very misleading, and do not give conditions as they really are. From all sources I get an agreement that the tax burden of the State as now distributed and collected is sadly lacking in that fairness which should characterize the collection of funds to pay the public expense of county and state.

"I believe it to be the duty of this body to take such initiatory steps as will result in getting the whole subject of taxation before the legislature in the near future, and so fortified with facts and figures relative to all the varied interests of the State that justice will be easily obtainable. To this end I invite this body to consider the advisability of petitioning the incoming legislature to authorize the appointment by the governor of the State of a non-partisan tax statistics commission, consisting of at least three persons, and as representative as possible of the interests of agriculture, corporate property, and the general interests of the State, whose duty it shall be to collect statistics and facts touching all the interests of the State relative to taxation matters. The relative proportion of taxable property that escapes taxation and that which is taxed below value, the relative value of taxable real estate and personal property and the proportion of tax paid by each, the proportion of tax paid by corporations as compared with other property interests based upon relative value, and all such other matters as would let in the light upon this whole question, and to make report to the governor of the State previous to the session of the legislature for 1897. From this report a tax bill correcting all of the inequalities of which we now complain could be formulated and enacted into law."

At the same State Grange a special legislative committee recommended that Section 18 of the tax law of 1893 be amended so as to put all parties under oath when their property is listed and assessed, and where in Section 18 of the tax law it says "The supervisor may, in his discretion, put any party under oath," instead thereof insert, "shall put all parties under oath when taking their assessment."

The Grange took favorable action upon both of these recommendations, and a bill providing for the appointment of a tax statistician (it having been decided that such an official would perhaps give better satisfaction than a commission) was introduced in the legislature of 1895 by Brother E. A. Willey, of Van Buren county, and this bill was made the leading subject of agitation before the legislature of that year, so far as the Grange was concerned. After various amendments and a good bit of hard fighting the bill became a law and went into operation during the summer of 1895.

FRESH AIR WORK.

Dear Friends and Members of the Order:—Our fresh air work is languishing for the want of the offer of homes. A letter from the agent at Detroit says "there are so many applications for children and working girls to go out for just two weeks, and so few homes to receive them. If you could only show to the people the homes from which these children come, homes hardly worth the name, nothing but squalor and poverty, you would not wonder that they long for a change from this, to comfort, cleanliness and plenty." One woman, when urged to take a little girl for two weeks, said: "Yes, I would like to take one, but am fearful that she would be very untidy and dirty." Very likely she would be, but soap and water are cheap, and it is for this very reason that they need to come.

Some say, "I have all I can do now." This is true, and yet the little more is so little, while the pleasure of bringing into these starved, barren little lives the comforts and joys of a two weeks filled with plenty is so exquisite, that I know from experience you will scarcely realize the added burden but feel it has been a real blessing not only to the recipient but to yourself.

There are many working girls in shops, factories and stores who desire to avail themselves of this rest. There are scores of farm homes in Michigan filled with comforts in which these tired girls could find such sweet rest that the memory of those two weeks would linger with them as long as life shall last. Think of giving such a pleasure to one of God's children that it is held in remembrance for years. Only two weeks' shelter and board.

From a letter written by one of these girls, who for three summers has shared the same home, let me quote: "Only twelve days until I can come to you again (I count the days you see.) I have thought so many times of the happy hours, the long restful days, the quiet and peace that I found with you. What it has been to me and done for me I can never tell you."

This girl, as others, just went into the home and staid. That is what they want and what they need. One woman says, "I want a rest, I need a rest, but I cannot have it. I would like to go on this Farmer excursion, but cannot; no one offers to take me for an outing. Does that alter the case at all? Are you not willing to give to someone else that which you feel you would like, and what you need? If your daughter clerked in a store for twelve months in a year save two weeks' vacation, and if her earnings went into the family fund except sufficient for her clothing, would you not be thankful again and again if some good woman with a great mother heart should say, send your girl to me for two weeks; I will mother her; she shall just share our common lot, have a good time and come back to the old life renewed in body and mind to fight the battle for bread and butter, clothes and shelter. Would you not be thankful?"

Dear sisters, let us put into practice some of our Christian principles. We all know the first and last commandment, "Thou shalt love the Lord thy God," etc., and we also remember what the Christ also added when the lawyer questioned him as to which was the greatest of them all. He gave him the first and then said, "thy neighbor as thyself." On these two hang all the law and the prophets. Let us put ourselves in their places and then do as we would like to be done by.

Miss Farquhar says there is one case, that of an old lady and two little boys, who very much need to go out. Who has a heart and home large enough for the three for two weeks?

Will you not canvas your Granges at your next meeting and see how many can be taken for just two weeks? And then address Miss Dorothea Farquhar, 95 Watson St., Detroit.

THE NATIONAL GRANGE.

Office of the Secretary, Washington, D. C.
Editor Grange Dept. Mich. Farmer:

I select from among many on file in this office the following resolutions appreciative of the recent action of the National Grange in its attempt to advance the interests of producers and consumers, in establishing a closer and less expensive method for the exchange of the products of the farm and factory into the hands of the consumer and user, with the least possible additional expense in commissions and

charges. Also expressive of appreciation of the Patrons and of farmers generally, in the successful effort of the legislative committee in securing the appropriation from Congress of \$150,000 to continue the experiment of the practicability of free rural mail delivery.

JOHN TRIMBLE, Secretary.

The Legislative Committee of the National Grange is composed as follows: Aaron Jones, Worthy Master; J. H. Brigham, Assistant Secretary of Agriculture; N. J. Bachelder, Chairman Executive Committee of the National Grange.

The following resolution was adopted by Chautauqua County Pomona Grange, N. Y., June 10, 1898:

"Resolved, That the thanks of every Pomona and Subordinate Grange in the land, and of all persons interested in the free delivery of rural mail, are due the Legislative Committee of the National Grange for the successful effort in securing a favorable report from Congress for an appropriation of \$150,000 for free rural mail delivery, after the former appropriation had been stricken from the list.

"Resolved, That a copy of this proceeding be sent the National Secretary, for publication in Grange papers."

The following resolution was also adopted at the same meeting:

"Resolved, That Chautauqua County Pomona Grange recognizes the importance of the re-creation of the National Grange, in the endeavor to promote closer relations between producer and consumer, by asking each State Grange to appoint a committee, the object of whose work shall be to endeavor to bring about so desirable a condition, in accordance with the basic principle on which the Grange was founded."

GRANGE NEWS.

POSTAL JOTTINGS.

Allendale Grange, No. 421—Ottawa Co.—entertained Western Pomona Grange, July 30.—D. H. C.

North Rome Grange, No. 735—Lenawee Co.—will begin work on the new hall as soon as convenient.—W. G. B.

Ensley Centre Grange, No. 544—Newaygo Co.—had a picnic July 16 at Big Whitefish Lake. All report a good time.—Minnie Holmes.

Sylvan Grange, No. 393—Oceana Co.—decided to hold a harvest picnic. We have good music and interesting program.—Victor Munson.

Alumina Grange, No. 585—Muskegon Co.—We will hold open Grange Aug. 13, and invite some one interested in sugar beet culture to address us on that subject.—Mrs. Dell Viets.

Sodus Grange, No. 123—Berrien Co.—are holding regular meetings and have added some new members since last report. Sent in a large order for binder twine and the deal was very satisfactory.—Laura Morgan.

Ashland Grange, No. 545—Newaygo Co.—had several visitors at the last meeting and initiated two in third and fourth degrees. Ice cream and cake served after initiation and program.—Minnie A. Brink.

Easport Grange, No. 470.—July 14 had a fair sized meeting with short literary program. Discussed the question of having an open meeting. Our Grange does not meet early enough in the evening to go through with all its business and also a good literary program in the same evening.—W. J. Olmsted.

Whitney Grange, No. 513—Tuscola Co.—sent a large order for binder twine and considerable Paris green. At a special meeting last Thursday made out quite a large order for groceries. Have had two socials to raise money to purchase badges, and are now ready for visitors. Members seem to be getting waked up.—N. W.

Battle Creek Grange, No. 66—Calhoun Co.—held its first meeting after vacation, Aug. 4. Committee on entertainment was appointed to assist in raising money to pay the debt on the new hall. To systematize work and save time will hereafter confer the first two degrees only at the first meeting of the month and last two degrees at second meeting.—Lillian Adams.

Onsted Grange—Lenawee Co.—bought nearly 900 pounds binder twine which gave good satisfaction. July 30, discussed question "Shall women attend the annual school meeting? Every sister spoke on the question and all thought they should attend and thus elect better school officers and

arouse better interest in school affairs.—Charlotte Maxwell.

Cascade Grange had the following points brought out in regard to gathering seed corn. Remove all signs of smut and also the tassels from barren stalks; save the corn before cutting, or at cutting and husking time if not too late, wet and cold. Keep dry, and shell by hand. Save three or four times what you want, and select the best. Our August meetings will be on the 13th at 1:30 p. m., and on the 25th at 7:00 p. m.—Cor.

POMONA GRANGES.

NEWAYGO POMONA.

Newaygo County Pomona will meet with Hesperia Grange, Aug. 31 and Sept. 1. It will be a fruit Grange and each Patron is requested to bring samples of fruit, etc., and to be prepared to tell some of their good or bad qualities. A good attendance is desired, as topics of interest to all will be discussed.—C. K.

BARRY POMONA.

Barry County Pomona will hold its third quarterly meeting with Irving Grange on Friday, August 26, commencing at 10 o'clock.—Frank S. Jenkins, Secretary.

WESTERN POMONA.

Western Pomona held a special meeting July 30, with Allendale Grange, whose hall was well filled with interesting speakers and attentive listeners. "Along what lines can the farmer best advance his interests," was the first subject discussed. "Keep stock enough to consume grain and hay raised. Sell produce at home. Maintain the Grange organization."—were some of the suggestions offered.

Bro. E. H. Woodward spoke on the past achievements of the Grange.

Bro. Melvin Smith opened the subject "What does the world demand of the young men and women of the present day." He said the young men and women should be progressive, should be educated, and patriotic. Bro. Frank Woodward thinks they should be specially educated along political lines for therein lies the safety and perpetuity of the nation.

Bro. Charles Wilde told of the personal benefits derived from the Grange.

"How to be rich without money," was the subject of an essay by Sister Ellen Smith. "A happy and cheerful disposition, a contented mind and a continual striving to make others happy," were some of the requirements mentioned.

This program was interspersed by fine readings and recitations and music by a choir and mandolin orchestra. The first regular meeting will be held at Trent, Aug. 25 and 26.—Mrs. Bertha Smith, Sec'y.

WAYNE POMONA.

Wayne Pomona met at the Ash Center Grange hall in Monroe Co., July 29th. Four Granges were represented and prosperity reported. One has monthly meetings, one weekly, and two every two weeks.

Question box opened and question. "Does it pay to use commercial fertilizer?" decided that it does on certain soils. On second question, "Should a lady of the house have a voice in the planning of the new house," the universal opinion was that she should.

Adjourned for dinner and afternoon session was devoted to subjects for discussion, interspersed with singing. First subject, "What advantages has farm life over that of other callings?" Advantages were numerous. Second, "Railroad taxation," in favor of tax. Third, "Is labor necessary for the highest development of man?" was decided in the affirmative. Fourth, "Is amiability an inherited or acquired trait of character?" Acquired. Fifth, "Economy in the home and on the farm." There are various ways to economize. Closed for supper and ice cream. About 80 members present; a good attendance from various Granges.—Cor.

ALLEGAN POMONA.

Allegan County Pomona met with Allegan Central Grange, July 21st. A goodly number were in attendance and a very interesting time was enjoyed. Reports from seven different Granges were given and while some were not as favorable as we could wish, others were booming and adding new members every meeting. Program consisted of songs, recitations and following questions: First, "Does it pay farmers to keep bees?" Decided it did.

Second, "Which is the best method of canning fruit?" If you wish it canned whole only cook enough to can

one can at a time, and many other good suggestions.

Third, Free text books." Not in favor of them.

Fourth, "What will kill squash bugs?" Several remedies were suggested, but only tested one, ashes and Paris green mixed and applied when dew is on.

Fifth, "Will clover seed do as well sowed in fall as spring?" Also answered in affirmative.

Next meeting to be held first Thursday in October with Ganges Grange.

Notice change of date for meeting from usual time third Thursday in October to first Thursday.—Oeta Bragg, Sec.

LENAAWEE POMONA.

Lenawee Pomona Grange met with South Ogden Grange at its new hall August 4, and was nicely entertained; 23 joined.

Several topics of interest were discussed, Bro. Harry Moore, of Palmyra Grange, taking the subject, "How can life on the farm be made more enjoyable?" We differ in our tastes, manner of life, joys and make-up. We should appreciate our calling. The farmer's occupation calls for work, hard work. There must be labor, and there must also be enjoyment to counteract the effects of prolonged labor. Sometimes little things annoy. Did you ever see a pig pen considerably designed to save steps, and built close to the house that the good wife might easily empty the slops?

Let us get in harmony with the children, and get the children in harmony with us. Don't be afraid of over-educating the children. Keep their hearts full of ambition and inspiration. Hospitality adds to enjoyment, also the Grange, its sociability and its halls and their belongings, our Grange homes. Little things may make or destroy a happy home. Weeds about the house are an irritant to mother and daughters. Cut them. To the young men: The young ladies have an eye for beauty. Would have you be as careful of your dress and demeanor at Grange as at church.

"Does the farmer have an equal opportunity with those of other occupations," by Bro. Stone, of Medina. If reference is made to his getting to Congress, would answer no; although those engaged in this occupation would compare favorably with the carpenter, shoemaker, blacksmith, etc. Financially the larger part of the wage workers are nearest to dependence. Many do not own their own homes. Many are foreigners who do not know the requirements of a free country. The farmer is in part engrafted to the soil on which he lives, and is therefore deeply interested in progress and improvement. Extreme riches are not apt to be in the hands of the farmer or the laboring man. Spurgeon said: "You can tell how little God thought of riches by seeing the class with whom he entrusted them." The graduate of the little red school-house is everywhere in evidence.

Bro. Horton, master of our State Grange, gave a talk on the subject of Grange contracts, and how to use them.

A series of important resolutions were adopted. Fred Bay thought that in some state a law had been adopted making a note, mortgage or contract void if it does not have the stamp of the assessor attached. Bro. Horton thought such a law too sweeping to stand, and liable to be declared unconstitutional by the supreme court. A better method seemed to be to nullify the interest only.

A large program of music, recitations, etc., was also enjoyed by the audience, which was large for being held clear at one side of the county.—E. W. Allis, Cor.

Excursion to Agricultural College.

The Michigan Central is arranging for two grand excursions from stations Wayne to Holt, inclusive, and Bay City to Bath, inclusive, to Agricultural College, Lansing, the former on the 16th and the latter the 18th of August. Full information may be obtained of Michigan Central Agents.

Petoskey, Charlevoix & Traverse City Annual Low Rate Excursion.

Attention is called to an advertisement in another column of this paper of the annual excursion to Northern Resorts via the D.G.R. & W.R.R. on August 23. Look it up and make your arrangements to go.

Another Cheap Excursion to Grand Rapids.

The Detroit & Milwaukee Division of the Grand Trunk Railway will give another of their popular cheap excursions from Detroit to Grand Rapids on Sunday, August 14th. Rate for the round trip will be \$1.85. Trains will leave Brush St. depot at 7 in the morning, reaching Grand Rapids at 12 noon, and return leave Grand Rapids at 7 p. m. For information and tickets apply to the City Office, 84 Woodward Ave., or at the Brush St. depot.

The Poultry Yard.

For The Michigan Farmer.

POULTRY COMMENTS.

It is difficult to over-estimate the importance of keeping a supply of fresh, pure water before the growing ducks. That is true of any kind of young stock in the poultry line, but is especially so of the waterfowl side of poultrydom. The duckling requires a great deal of water not only because it consumes it in considerable quantities, but it wastes it in much greater amounts. The question that every duck grower must solve is how to keep a supply of water before them in sufficient quantities, and yet keep it in drinkable condition.

For very young ducks a suitable arrangement can be easily contrived by taking a shallow dish and arranging a board over the top, or rather on the surface of the water, so that there will be less danger of the youngsters getting in and fouling the water or wetting themselves, making themselves liable to the cramps. If the dish is about eight or nine inches in diameter, a board cut square so that it will just nicely fit down onto the surface of the water, with a nail in each corner to serve as legs, so that when the water is low the board will remain at the top. If the dish is twelve or fourteen inches in diameter, I would suggest that the board be cut octagonal in shape. If it is cut square, the space left open on account of the long sides will be so considerable that the desired effects will to a very great extent be seriously handicapped. But if the board is cut octagonal the length of side will be so diminished that no particular difference will be noticed. I would suggest that in either case the board be sized so that it will nicely rest on the bottom, then by being supported by the nail-legs after it goes down to a certain depth, it leaves ample room between its edges and the sides of the dish to allow the fowl to insert its bill without any difficulty. This arrangement will prove excellent not only for ducklings but also for half-grown or even matured fowls, and can be used to a good advantage by anyone, unless they already have an arrangement which they deem preferable.

Recently I noticed another idea that was being worked out to an advantage and seemed to be serving an excellent purpose; it can without doubt be used by anyone, either for the young stock or for the old fowls. This arrangement consisted simply of a small keg set up on a box with a small spigot in one end from which the water was allowed to drop into a dish just below. The contrivance is very simple, but can easily be made to answer very well, and if used in connection with the idea suggested above, it would become at once all the more practical. The obvious idea in the keg is to keep a supply of pure water constantly coming before the ducks. This will be found to be a great advantage, especially where the ducks are closely yarded, as is very apt to be the case where the youngsters are confined, as they generally are about this season.

The supply of water to the ducklings suggested another point that in many minds is still unsolved, and this is: "Will sufficient water to bathe in injure young ducks?" It seems to me that this can be answered both affirmatively and negatively, and yet still both be entirely correct. All depends to a very great extent on how the young stock are started. If a duckling is started without water, and has become accustomed to being without it, it would be folly to allow it to have access to it at once, except under the most favorable conditions, otherwise cramps would almost inevitably follow. I think beyond a question that all duck growers will agree that ducklings must have had free access to water from the very first in order to be hardened to it, otherwise it is scarcely safe to allow them to have it at all, except in quantities sufficient for drinking purposes. That a duckling can withstand the attack from cramps when it has been given free range to water is duly evidenced by the fact that when a broody duck brings off her brood, if it is possible, the first place that she will take them to is a running stream or a pond of water. In such cases it is an almost invariable rule that few if any ducks are lost in any way ex-

cept by accidents. I do not wish to throw out the idea that if the youngsters have but got "used" to a thing they are proof against water in any form. Such would be very erroneous. Ducklings, and old ducks, too, for that matter, cannot stand damp quarters and do well. With the former it is almost sure death, and the latter will do little or nothing towards recompensing the owner for his trouble.

"A Few Hens" in a recent issue says: "An English writer pays this tribute to the American Bronze turkey: There are two points to consider before choosing the breed of turkey—viz., whether the birds are to be reared with the purpose of making a profit from them, or whether they are only for home consumption. If the former, I have no hesitation in pronouncing for the American Bronze breed. For profit it is merely a question of obtaining birds of the heaviest possible weight when they are from six to nine months old. No variety is equal to this breed if profit is desired. To obtain cockerels at Christmas, weighing 24 pounds when plucked, and hens 15 pounds in the same state, may fairly be considered good work from poult hatched during the early part of May. No other variety will give such results. Therefore the American Bronze turkey is the breed to select. Not only does this breed produce heavy weights, but quality of flesh is also obtained."

There is no doubt that the Bronze turkey ranks high in the estimation of turkey breeders, as is amply attested by the immense numbers that are grown and put upon the market each year. Without doubt there are other breeds that have nearly if not as good a claim on the good will of the turkey grower as has the Bronze breed, but are laboring under the difficulty of not being as favorably known to the general public. Take for instance the White Hollands. They are some smaller than the Bronze, still they are a most excellent breed and it only requires time for them to become thoroughly known and they will be one of our most popular breeds of turkeys.

Mr. James Rankin, the well-known market-poultry raiser of the East, in a recent article says: "Whenever we have removed the male fowl after the breeding season was over, it always seemed to us that the egg production was much increased." There are many people who seem either to have forgotten or else have never thoroughly understood that the male is not a necessary factor in egg production. If is an open question whether the male bird increases the egg yield or diminishes it. Many well-informed men assert that he makes no practical difference whatever, while others are equally positive that his attentions have a tendency to work permanent harm so far as the number of eggs is concerned, rather than good. In all probability neither is entirely correct; much, if not everything, depends on circumstances and conditions, together with the disposition of the male. It is well known that the male is very essential for fertile eggs, but it is not so well understood that if the male is entirely removed from the flock that the keeping qualities of the eggs will be very much increased. Some of our best authorities assert that a sterile egg will keep at least two or three times as long as one that has been fertilized. I have noticed this in an incubator, that a sterile egg can be kept at 103 degrees (hatching temperature) for two weeks, or even longer, and still come out in a fairly good condition; in fact, I dare say that there are many people who would not be able to detect the difference between one so acted upon and a comparatively fresh egg three or four days old. It is quite needless to say that if the egg had been fertilized the result would have been quite different, either a chick or a more or less decomposed egg. If egg collectors could only persuade their customers to dispose of their male birds at this season of the year, the duties of the egg tester would be very much lessened, and accordingly the per cent of eggs thrown out.

C. P. REYNOLDS.

Michigan Agricultural College. 225 students entered last September. Are you to be one of the large class coming this fall? For circulars, and other information, address PRES J. L. SNYDER, Agricultural College, Mich.

THE MICHIGAN FARMER

-AND-

State Journal of Agriculture.

THE LAWRENCE PUB. CO.,

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No deviation from above rates.

DETROIT, SATURDAY, AUGUST 13, 1898.
This paper is entered at the Detroit Postoffice as second class matter.

THE MICHIGAN FARMER ANNUAL EXCURSION.

Additional and Interesting Notes for Excursionists.

The excursion party will leave the dock, foot of Wayne street, this city, on Monday evening, August 22, at 10:30 p. m. All excursionists arriving in the afternoon or early evening are invited to make the commodious quarters of the Zenner-Raymond Co., No. 15 Atwater street west, their headquarters, for the evening. Tickets and keys to staterooms will be given out there at 8 p. m. This will give excursionists an opportunity to meet each other and get acquainted before the boat leaves.

The new offices, press and mailing rooms of The Farmer will be open from 8 to 9 p. m., so our friends may look them over. We shall be pleased to see as many of them here as possible.

In addition to those who have been previously mentioned as members of the excursion party, we add President J. L. Snyder and Prof. Clinton D. Smith and wife, of the Agricultural College, and Mr. John C. Chalmers and wife, of Ann Arbor.

Of those connected with The Farmer who will accompany the excursion there will be Mrs. E. E. Rockwood, of The Household, A. C. Bird, Kenyon L. Butterfield, J. H. Brown, Robert Gibbons, Geo. J. Munsell, M. J. Lawrence, and Paul T. Lawrence; also Hon. W. I. Chamberlain, of Ohio. Most of the parties named will be accompanied by their wives.

The boat chosen for the excursion is the City of Alpena, first-class in every respect, and completely refitted for this season.

The Zenner-Raymond rooms are near the foot of Griswold on Atwater street, while the dock from which the boat leaves is at the foot of Wayne street, only two blocks distant.

Those who intend going on the excursion should make up their minds at once, so we can secure them staterooms. It is not likely a single one will be left on the day of sailing. Circulars, with full particulars, sent on application.

The peppermint oil crop in this State has proved very disappointing to growers this season. The estimate is for a crop one-third less than last year.

Michigan produces about a third of all the peppermint oil in the United States, and this large decrease in the yield must operate to strengthen values. The crop was severely injured by the July frosts, as was expected by the growers at the time they occurred.

AT HOME AGAIN.

The Michigan Farmer, with all its belongings, has been permanently located at 67 to 71 Michigan avenue, in quarters especially fitted up for its use. These quarters are very commodious, well lighted, and fitted up with special regard to the future requirements of the paper. The new plant, consisting of machinery built especially for the use of The Farmer, is as complete in its details as any similar one in the country. The presses are of the latest improved type, with a speed as high as consistent with fine work. Then the machinery for folding and pasting the paper is very complete, and a credit to the ingenuity of the mechanic and the class of workmanship turned out by the manufacturers. The type is direct from one of the best foundries in the country, and the fittings of the composing and mailing rooms are complete and of the most improved styles.

This week's issue is printed on our own presses, the first since the disastrous fire that swept the former plant out of existence. Since that occurrence The Farmer has been printed at the Cleveland office, and while everything possible was done to get the paper out in good shape, many of its special features, such as our local live stock reports, had to be discontinued. Now that we are back again to Michigan, with everything necessary for the work of publishing a first-class agricultural paper, these features will be renewed, and improved upon wherever possible. No time has been lost in the work of preparing our new plant, and manufacturers were pushed to their limit in building the necessary machinery. The work has been done, and done well, as our readers will see by the improved appearance of the paper.

From now on our readers may expect full market reports, including that of the Detroit live stock, up to the latest hour before going to press, and in all departments of the paper no pains will be spared to make them complete and valuable to the farmer, the dairyman, the horticulturist, and the live stock breeder. The Michigan Farmer will in the future, as in the past, aim to fully represent the various producing interests of our great State, and to accomplish this more fully than ever before every energy will be bent.

To our old correspondents we would say we shall be pleased to hear from you again, and hope you will have plenty of valuable and timely matter for the columns of The Farmer. We should be pleased to hear from new correspondents who can furnish acceptable matter for any of its departments. We want it interesting and valuable, and particularly suited to the conditions obtaining in Michigan. It is the farmers of this State in whose success we are particularly interested, and for whom The Michigan Farmer is published.

Judge Gary, of Chicago, has rendered a decision to the effect that money lost on a board of trade through speculation is not lost in gambling, and therefore cannot be recovered under the Illinois statute as if lost in gambling. Perhaps the Judge reasoned that there was no chance taken by men who put their money in the hands of dealers—they were sure to lose, and where no chances are taken there can be no gambling.

THERE IS GOOD IN THE INJUNCTION.

There is a very strong prejudice among citizens generally regarding the power of the courts to issue injunctions restraining bodies of men, or individuals, from following their own ideas of what is due to the rights of others. The public press has been especially pronounced in its hostility to the injunction. It is found, however, that even the abused injunction can be used successfully for the protection of the people from the rapacity or dishonesty of public officials. The city of Detroit, or rather a number of its reputable citizens, have recently tested its efficiency in protecting the public funds from the attack of those who should be their guardians. The first test was in the case of the Board of Education, a body of citizens whose actions in the past have not been of a character to give the public a high opinion of either its good sense or integrity. The Board has been complaining for years that the amount of money placed at its disposal has not been commensurate with the public demands for increased school facilities. Last year it cut down most of the teachers' salaries, on the ground that there was not sufficient money to pay them. There were, also, some 3,000 children of school age who could not be accommodated in the public schools. At a meeting of the Board a resolution was passed appropriating \$500 to entertain some public men who were to come on a visit to the city. To stop this misappropriation of the public funds a number of citizens applied to the courts for an injunction. It was granted, and the Board was told that it had no power to expend public funds except for the purposes for which they had been placed at its disposal. This is good sense as well as good law, and while some members of the Board abused the public-spirited citizens who took it upon themselves to put a stop to what was becoming a public scandal, their action has met with general approval.

The success of these citizens in the case of the Board of Education led them to ask for an injunction restraining the Common Council from expending money in public entertainment beyond the amount stipulated in the city charter. The charter expressly limits the amount of such expenditures to \$2,000 per annum. The Council, regardless of this explicit limitation of its powers in this direction, appropriated \$5,000 for the entertainment of the delegates to the convention of the League of American Municipalities, and the parties who applied for the injunction asked that the Common Council, the City Controller, and the City Treasurer be restrained from expending or paying over the \$5,000 referred to. The courts issued the injunction asked for, and the matter was argued before Judges Frazer, Hosmer and Lillibridge, with Assistant Corporation Counsel Joslyn for the Council, and Carlos E. Warner for the petitioners. The judges, after listening to both sides, made the injunction permanent, and the members of the Common Council are dividing their time between abusing the citizens who stopped their free use of the public funds and devising some means of paying the bills contracted.

It was quite a spectacle to see Mr. Joslyn, one of the great reformers of the city, fighting to allow the Common Council the privilege of helping themselves out of the public treasury whenever they wanted funds for a good time. He proposes to take the case into the Supreme Court, and we sincerely hope he will. The responsibility of public officials regarding the funds of the city cannot be settled too

soon for the well-being of the taxpayers.

As to the people for whom the money was spent—or rather the bills were contracted, for they have not yet been paid—the Free Press reporter, who accompanied the "invited guests," says:

"Most of the time of the League of American Municipalities yesterday was taken up with the excursion given the delegates up the river. A morning session was held, at which about 300 delegates appeared, but there was a better attendance on the boats that took the crowd up the river in the afternoon. The local committee had chartered the City of Toledo and the Pleasure and when they left the foot of Bates street at 2 p. m. there were about 2,500 people on both boats. But the picnic was not for the visiting delegates alone. As a matter of fact, it would appear as if the excursion was gotten up for the benefit of a Detroit crowd. Where there was one man from out of town, there were about ten from the city. City hall clerks, of course, were plentiful. Janitors and their families were aboard, and many who could not even claim that humble connection with the city government were on hand to drink the ginger ale and eat the iced cream and sandwiches that the refreshment committee had provided. It was noticeable that some of the Detroit aldermen had a fair share of their constituency with them."

When it is remembered that the Municipal League is supposed to devote its efforts to the reformation of municipal affairs, this matter of taking the funds of the taxpayers without legal right, and spending them on the personal friends of the city officials and a lot of city employees, is really sublime in its barefaced impudence and disregard of law and justice. That injunction was very timely.

HIGH-PRICED OFFICIALS ARE THE REFORMERS.

The approach of the fall elections, and the scramble for nominations among aspiring officials, is rendered interesting in Wayne county by the publication of some figures regarding the cost of running a "reform" administration. County Treasurer A. I. McLeod has held that position for about three and a half years. During most of that time the position was worth from \$12,000 to \$15,000 per year. The Legislature cut off some of the perquisites of the office, and it will not pay quite so well hereafter. The office is a very nice one outside of the big salary and fees. The occupant has a good time, can take a vacation of a week or a month at any time except the month taxes are being paid, and as a rule spends one to two hours per day in his office. Yet he rendered a bill against the county for overtime, between November 15 and December 31, of \$312.51. The auditors allowed such a bill each year he has occupied the office.

Mr. McLeod's deputy, who draws a salary of \$150 per month, collected for overtime, between November 15 and May 14, \$474.00. As the pay for overtime is 50 cents per hour, it will be seen that the deputy treasurer must have burned the midnight oil with great regularity, and done with little sleep. The overtime charge will be appreciated when it is stated that in addition to his duties as deputy treasurer this hard-working citizen performed those of alderman and supervisor part of the time, drawing a salary for each. Here were three salaries and pay for overtime drawn by one man, and yet he is not satisfied. In an interview this Detroit Pooh Bah said to a reporter: "Ordinarily when men work overtime they get double pay, and, after certain hours, triple pay. My regular pay is \$6 per day, and if I was paid according to the way ordinary men are paid, my extra time would come in at the rate of \$12 a day at least, but all we get is 50 cents an hour, which is the same as all the rest of the clerks."

These gentlemen are again candidates for office, but we think they are too costly a luxury for the county to indulge in any longer. Their time is too valuable. Let them pay for it themselves—the taxpayers cannot afford to.

HIS OPINION OF CHEAP LIFE INSURANCE.

Insurance Commissioner Campbell, of this State, in his forthcoming annual report, will devote a chapter to life companies. The Commissioner has done a great and much needed service to the people of Michigan by holding life insurance companies to a strict observance of the laws under which they are allowed to do business. Incidentally, he has practically closed out a number of weak associations and companies which were in no condition to keep faith with their members and patrons, and therefore not in any sense insurance companies. In speaking of life companies with legal reserves, of which some thirty-eight are now carrying on business in Michigan, the Commissioner says:

"The conflict between old line life insurance and assessment companies has gone on during the year in the usual manner, each attacking the other and pointing out the weak places in their respective armor. Upon the whole, the contest does not seem to be detrimental to life insurance in general. People are becoming better educated and learning some of the vital principles that underlie safe insurance. There are yet many frauds and swindling concerns in existence, and it will be many years, if ever, before all of them will be eradicated. That too much money is often loaded upon the mortality element of the life insurance premium for expenses cannot well be controverted in the majority of old line companies, and it is because of this fact that many of the assessment companies make a plausible showing for the existence of assessment life insurance. Exorbitant salaries, overpaid officials, useless and needless expenses and lavish outlays by insurance companies, making the expense element almost equal to, if not quite, in excess of the amount required to pay death claims, causes grave suspicion in the minds of policy holders that the company is either collecting too much money from them or that the company must fail from mismanagement."

Mr. Campbell has hit the bull's-eye several times in that paragraph, and we commend what he says to those who hold policies, or expect to, in these companies. The cost of carrying insurance, outside of fraternal organizations, is undoubtedly far beyond what it should be were the business carried on in a conservative and economical manner. The large salaries paid, and the heavy percentage allowed solicitors for new business is far beyond what it should be in nearly all companies, and is one reason why the great mass of people will not invest anything in life insurance.

Speaking of fraternal organizations which do a life insurance business, the Commissioner says that no such company or organization can long survive which does not make the assessments high enough to provide for a reserve fund. Upon this point he says:

"There is but one great mortality experience upon which tables of rates must be based and computed, and the company of whatever class that disregards such table will come to grief sooner or later. Plainly stated, it has been found that persons physically sound and of certain ages must pay certain sums per year during life in order to meet the death losses of the company. This implies that in the earlier years the amounts not needed to pay mortality expenses will be laid aside as a reserve fund and earn interest at the rate of 4 per cent. A person at 20 years should pay on \$1,000 \$12.67 per year; at 25 years the cost is \$14.21; at 30, \$16.21; at 35, \$18.24; at 40, \$22.35, and so on. These rates do not provide for the expenses of managing the company, which must be borne by an additional assessment."

"While there are many plans and schemes of life insurance, all must be measured by the expectancy of life, now so well known, if they expect to survive. During the last year many of the assessment companies, both fraternal and co-operative, constructed upon the low rate plan, have gone into the hands of receivers. These companies have been collecting just enough premiums to pay losses and expenses, laying by no reserve for the increased mortality which every company must surely experience sooner or later."

The Commissioner concludes with some suggestions to such companies or fraternal organizations as are depending upon assessments which only meet its expenses as they occur, and therefore accumulate no reserve, which are worthy of close consideration by those who have their management in charge. He says:

"It is greatly to be hoped that the companies now doing business in the State will, at the earliest possible moment, take steps looking toward survival. The knowing ones in these organizations un-

derstand the situation fully. Some of them are honest enough to admit the same, while others, for the sake of a temporary job or to float their false assurances as long as possible, are yet temporizing."

"If step rates, increasing each year or by terms of years, are to be adopted, the assured should know what will be his rates in advance. If the company is to accumulate a reserve upon a legal premium plan, then the premium ought to be not only sufficient, but the law ought to require a valuation of the policies of the company, and that the company at all times maintain a reserve, according to some approved table of experience."

"In other words, whatever may be the plan adopted, laws should be enacted that will prohibit and punish wholesale deception and make insurance exactly what is contracted for. These words followed the failure of many so-called insurance companies during the last year, and I regret to say are but slightly in advance of many others that must and will occur in the near future. Although strictures of this character bring expected criticism, it would be a disregard of duty were the warning not given. Time will too soon emphasize the truth of these comments."

NEWS SUMMARY.

Michigan.

Four well-developed cases of small-pox are reported at Morenci.

A four and a-half foot vein of coal has been found near St. Charles, Saginaw County.

Citizens of Niles are preparing to have a grand peace carnival in a few weeks to celebrate the ending of the war.

Prof. Fred R. Hathaway, of the Flint public schools, has been elected superintendent of the Grand Rapids schools, at a salary of \$3,000.

Ex-Cashier Millard, who was placed in jail at Flint on the charge of the embezzlement of \$2,725 from the Fenton bank funds, has been released on bail.

Secretary of State Gardner finds the work in his department so well advanced that he has recently dispensed with the services of five of his assistants.

George K. Grove, one of Lansing's pioneer merchants, and a well-known man throughout central Michigan, died last week at the age of 71.

During the month of July there were 15 school districts in Washtenaw County which voted upon the question of free text books and uniformity of the same. Without a single exception the proposition was voted down.

Rinaldo K. Sherd, of Co. H, Thirty-fourth Michigan volunteers who died in Santiago, July 29, was 22 years of age, and leaves a young widow and babe at Leslie. He was an industrious young farmer of good reputation.

The bank at Richland, Kalamazoo Co., was robbed on Friday morning of last week. The vault and safe were blown open, and \$7,000 in cash and \$50,000 in bank paper secured. The authorities have so far been unable to get a satisfactory clue, although several suspects have been arrested.

President Angell, of the University, who has been absent a year as United States minister to Turkey, will sail for home August 13. It will be remembered that he resigned in May. He will resume his duties at Ann Arbor next month. He is succeeded at Constantinople by Oscar S. Straus, of New York.

The sheriff of Calhoun County captured a man last Sunday night in whose possession he found a complete counterfeiting outfit. The man's name is William A. Kulp, who was arrested under similar circumstances at Kalamazoo a few years ago, and was convicted and compelled to serve 20 months in prison.

Alfred Daniels, a farmer living near Saline, attempted to pick up a leather strap lying on his kitchen floor Saturday evening after dusk. The strap turned out to be a rather lively rattlesnake. Daniels is still lying near the point of death from the effect of the rattler's bite.—Exchange.

Franchises have been asked for through several townships in Oakland County by the Flint and Lansing Electric Road Co. The plan outlined by one of the company's officers is to run a line from Flint to Lansing and then east to Farmington to connect with the Detroit line now being built.—Williamston Enterprise.

The free text-book proposition was roughly handled at Lansing's special school meeting last Saturday. Out of 570 votes cast, only 77 were in favor of free text books. This leaves the district under the operation of the uniform text-book act, unless it shall decide differently. Another special election is to be held soon for the purpose of settling that point.

The total number of Michigan men killed or dying of wounds or disease in the present war up to the present time is 27. The greater number of these were victims of disease. The total number wounded is 22, while twice as many more are on the sick list. A very large proportion of the dead and wounded were members of the 33d and 34th regiments.

General.

The bodies of all our soldiers interred in Cuba are to be brought home in metallic cases, after the war is over, and consigned to their friends.

Sampson reports that only 2½ per cent of the men on board ships are sick. Gen. Shafter reports, August 7, a total of 3,897 sick, of which 2,532 are fever cases; 434 new fever cases were reported that day, and 601 were returned for duty.

The announcement is made from Washington that Secretary of State Day has decided to retire from the Cabinet as soon as the peace negotiations are concluded. It now seems probable that he will be one of the peace commissioners. Upon leaving the Cabinet he will resume his law practice in Canton, O.

A monument erected to the memory of Francis S. Key, the author of "The Star Spangled Banner," was unveiled at Frederick, Md., last Monday. Hon. Henry Watterson delivered the principal address

and the monument was unveiled by Miss Julia McHenry Howard, of Baltimore, a great granddaughter of Mr. Key.

Gen. Miles' forces have been advancing toward San Juan slowly, and meeting little resistance. Captain Goodrich, of the cruiser St. Louis, seized Arroyo and Guayama, and hoisted the stars and stripes, August 3. These harbors will be used as a base of supplies. General Stone made a reconnaissance north toward Arecibo, and met with enthusiastic reception from the natives in all towns and villages. Our forces are now in peaceful possession of the eastern portion of Porto Rico, except San Juan and vicinity. When all is ready the attack on San Juan will be a joint one, by land and sea. Fourteen American warships are now lying off San Juan.

The official statement of the terms of peace submitted to Spain is as follows: 1. The relinquishment of all claim of sovereignty over, or title to, the island of Cuba, as well as the immediate evacuation by Spain of the island. 2. The cession to the United States and immediate evacuation of Porto Rico and other islands under Spanish sovereignty in the West Indies. 3. The like cession of an island in the Ladrones. 4. The United States will occupy and hold the city, bay and harbor of Manila, pending the conclusion of a treaty of peace which shall determine the control, disposition and government of the Philippines. If Spain accepts, then this country and Spain will each appoint commissioners to arrange and complete a treaty of peace on these terms as a basis. Spain had the terms under consideration for over a week, and August 7 the report came from Madrid that the terms had been accepted and the reply telegraphed to M. Cambon, the French ambassador at Washington. While nothing official was given out it was rumored that in accepting our terms Spain had imposed a few conditions which would probably not be acceptable. However, on Wednesday Secretary Day and Ambassador Cambon held a lengthy conference at which they agreed upon the terms upon which the future negotiations for a treaty are to be conducted. These terms were drawn up in a document known as a protocol. This is yet to be signed by Secretary Day and Minister Cambon before being presented to the Spanish government. It is believed that this step will advance the peace negotiations to the point where the appointment of peace commissioners will be agreed upon, and that the cessation of hostilities is very close at hand.

Legal Department.

CONDUCTED BY EARL D. BABST,
56 Moffat Building, Detroit.

Game statutes as to quail, squirrel, duck, woodcock and duck.—O. S., August 1st.—It is lawful to kill squirrel from Oct. 1st to Dec. 31st; duck from Sept. 1st to Jan. 31st from one-half hour before sunrise until one and one-half hours after sunset of each day; partridge and quail from Oct. 1st to Dec. 1st. It is not lawful to kill snipe and woodcock, both being protected until the year 1905.

Adjacent owner may not destroy partition fence without making compensation.—S. L. H., Tecumseh, Mich.—A. owns improved farm. B. owns adjoining farm. B. burns the material in his road fence and likewise in the partition fence erected by A. A has had fence viewed and built another in place of one destroyed. Can A collect from B?—Yes. Call upon fence viewers, who should assess entire cost of fence against B. You intimate that B acted in malice. We cite you to Sec. 7 of the Acts of 1893, page 67, amending Sec. 929 of Howell's Statutes. "Every person who shall willfully and maliciously burn or otherwise destroy or injure, any pile or parcel of wood, boards, timber or other lumber, or any fence, bars or gate, or any stack of grain, hay or other vegetable product, or any standing trees, grain, grass, or other standing product of the soil, or the soil itself, of another, if such property so injured or destroyed shall be of the value of \$25 or less, shall be punished by a fine not exceeding \$100, or imprisonment in the county jail not exceeding three months, and if such property so injured or destroyed shall be of the value of more than \$25, such person shall be punished by imprisonment in the state prison not more than five years, or by fine not exceeding \$500, or by imprisonment in the county jail for not more than one year." In order to avoid liability for damages in causing the arrest of a person, place facts before prosecuting attorney and act on his advice.

Cropper agreement—duty of arbitrators.—H. D. S., Litchfield, Mich.—In issue of Aug. 6, page 93, you reply to query of W. H. L., of Litchfield, as to division of crops, etc., saying W. H. L. is entitled to one-third of crops raised on the additional farm which B rented of neighbor for the halves. Did your answer mean one-third of the total products, or only one-third of B's share? I wish to state this case as it would be to us—arbitrators—in the dispute between W. H. L. and B. W. H. L. first proposed to B to rent this No. 3 farm and he would furnish one-half of expense with B and then share alike between the one-half share. B says, I will do it if you will buy one-half of my teams and tools which you are now using. W. H. L. objects at once to that because he could buy horses of other parties for half less than B asked for his. That proposal stopped there. Afterwards B rents this farm alone, giving one-half and finding one-half seed, and tells W. H. L. of the agreement and says, if you want to work it go on with my teams and tools. He did so and now claims he is entitled to one-third of the whole products, or two-thirds of B's share. Which is right?—As stated last week, the division of crops between croppers, in the absence of definite terms, depends upon the custom of the neighborhood. Your statement of the case does not change our opinion of last week, except the fact that B furnished all the tools, horses, and implements. As arbitrators, it is your duty to divide the crops between B and W. H. L. in the manner

customary in your neighborhood, under similar circumstances, taking into account the fact that B furnished all the tools, etc., and without regard to the terms of rental which B had made with the owner of the farm. Your difficulty is but added testimony of the necessity of reducing such matters to writing, a step which we urge emphatically.

Tender must be present, absolute, and unconditional.—J. H., Mayville, Mich.—I gave a mortgage and note on my farm to a certain person, payable in five years. The note was payable at a certain bank here. The mortgage became due last December. On that date the agent of the mortgage offered to extend the mortgage upon certain conditions, which I did not like. I informed him that I would pay the mortgage, and on April 5 I deposited the money in the bank where note was payable, to the credit of the mortgagee. The bank informed the mortgagee's agent that the money had been paid in, and requested him to send mortgage, note and discharge. The agent replied that he would send note and mortgage upon receipt of the money, but could not send discharge, as the mortgage was then in Australia. The bank informed him that the money would be paid over when discharge was sent. The agent then notified the bank that he would expect the mortgage to pay interest until discharge came. The agent now claims to have the discharge, and offers to deliver it upon payment of the mortgage and interest from December up to this date. Now what I want to know is whether I am bound to pay the interest from April 5, the time I deposited the money in the bank for the mortgage, up to this date. It seems to me that when I paid the money into the bank where the note was made payable that that was a tender of payment and ought to stop interest.—We are of the opinion that you are liable for interest to date. It is questionable whether a tender has been made, but even granting that a tender was made, it was not an absolute and unconditional tender, but a tender on the express condition that a discharge must be sent. We base our opinion on the following language of the Supreme Court, 30 Michigan 150: "In view of the serious consequences to the holder of a mortgage, upon refusal of a tender—consequences which may often amount to the absolute loss of the entire debt—and in view of the strong temptation which must exist to contrive merely colorable or sham tenders not intended in good faith, we think the evidence should be so full, clear and satisfactory as to leave no reasonable doubt that the tender was so made that the holder must have understood it at the time to be a present, absolute and unconditional tender, intended to be in full payment and extinguishment of the mortgage, and not dependent upon his first executing a receipt or discharge, or any other contingency."

Ten-Day Low Rate Excursion, Mackinaw, Petoskey & Alpena via Michigan Central.

Special excursions to Mackinaw City and Alpena will leave Detroit via Michigan Central at 7:20 a. m. Aug. 24th, and for Petoskey, Traverse City and Charlevoix at 7:20 a. m. Aug. 25th. Very low rates. Call or write Michigan Central agents for full information. Excursion rates will also be made from other stations.

Another Niagara Falls Excursion via the Grand Trunk.

The Grand Trunk Railway System has decided upon another excursion from Detroit to Niagara Falls at the remarkably low rate of \$3.50 for the round trip on Tuesday, August 16, valid to return up to August 21. Avail yourselves of this opportunity. It may be the last excursion to the Falls this year. For information enquire at City Office, 84 Woodward Ave., or at depot, foot of Brush street.

An Unparalleled Opportunity for a Summer's Outing.

The Grand Trunk Railway System will give a series of popular low rate excursions from Detroit and stations on the system in Michigan as follows:

To Alpena, Tawas, Au Sable and Oscoda on Friday, August 19th. Tickets good to return for 10 days; rate from Detroit only \$4.00. To the Muskoka Lakes, and Highlands of Northern Ontario, on August 19th; good to return for 10 days; rate from Detroit only \$3.50. To Milwaukee on August 26th; good to return for 5 days. Special train leaves Detroit at 7 in the morning, reaches Grand Haven at noon and Milwaukee at 7:30 in the evening, giving a daylight trip across Lake Michigan. Rates only \$5.00.

Equally low rates are made from nearly all the Grand Trunk stations in Michigan and its connections for the above excursion. For further information inquire at 84 Woodward Ave., Brush St. Depot, Detroit, and of all agents of the Grand Trunk Railway System and Ben Fletcher, Trav. Pass. Agent, Detroit.

Niagara and Return via Michigan Central August 17th.

A better opportunity will never occur again to see the great Falls of Niagara for \$3.50. Michigan Central agents will tell you all about it.

JONES WHEATS.

My wheats are noted for sturdy straw, large yields, and are some of the most popular and profitable grown. Jones Longberry No. 1 has a record of 62 bushels per acre. Originator of Early Arcadian, Diamond Grit, Ontka Chief, E. Genesee Giant, and others. Send for catalogue to A. N. JONES, Newark, Wayne Co., N. Y.

SEED WHEAT.

Long Amber and No. 6, Bald White Wheat. Straight stiff straw. Heavy yielders. Price \$1.50 per bu., bags included. A. A. WOOD, Saline, Mich.

SEED WHEAT. We have for sale Dawson's Golden Chaff Seed Wheat. Price \$1 per bu. including bag. Mail samples sent on application. J. JENKS & CO., Sand Beach, Mich.

Gold for the Farmer's Pocket who grows Dawson's Strictly pure seed for sale by J. P. DEAN, Napoleon, Mich. Write for terms.

Dawson's Golden Chaff Seed Wheat for Sale.

PRICE \$1.00 per Bushel. Bags free.

C. G. JACKSON, Birmingham, Mich.

Dawson's Golden Chaff Seed Wheat for Sale. Yield 50 bushels per acre. Price \$1.25 per bushel. Bags free. J. H. HARRIS & CO., Caro, Mich.

The Household.

CONDUCTED BY MRS. ELLA E. ROCKWOOD.

We should be pleased to have any of our readers who take an interest in household topics send in their views and opinions upon any subject which is under discussion, or which they wish discussed. The invitation is general, and we hope to see it accepted by many. Address all letters for The Household to Mrs. Ella E. Rockwood, Flint, Mich.

For The Michigan Farmer.

THE BABY AT SCHOOL.

The baby has gone to school! ah, me!
What will the mother do,
With never a nail to button, or pin,
Or tie a little shoe?
How can she keep herself busy all day,
With her little hindering thing away?

Another basket to fill with lunch,
Another good-bye to say,
And the mother stands at the door to see
Her baby march away;
And turns, with a sigh, that is half relief,
And half a something akin to grief.

She thinks of a possible future morn,
When the children, one by one,
Will go from their home to the distant
world,
To battle with life alone,
And not even the baby be left to cheer.
The desolate home of the future year.

She picks up garments here and there,
Thrown down in careless haste,
And tries to think how it would seem
If nothing were displaced;
If the house were always still as this,
How could she bear its loneliness?

But mothers have no time to dream
Of future griefs, or joys;
She's very sure that night will bring
Home hungry girls and boys;
So casting useless fears away,
She labors cheerfully all day.

MARY A. SIMPSON.

HOME CHATS WITH FARMERS' WIVES.

SOMETHING TO EAT.

"Any more of that black bread left?" asked the Big Boy as he cast his eyes inquiringly over the table last night when we sat down to supper.

Investigation proved that the brown bread had all been eaten at dinner time, and a fresh supply would not be forthcoming until the morrow, so the meal was concluded without it.

Graham bread is greatly relished at our house. It is very easily made and palatable as well as healthful. We intend to keep it on hand and make it almost as regularly as the other.

My recipe is exactly the same as the one I use for graham gems; One pint buttermilk, one teaspoonful soda, one-fourth cup molasses, or a little sugar if the jug is empty, a little salt and an egg. Stir to a moderately thick batter with graham flour and bake in a loaf or in gem pans as preferred. I sometimes omit the egg and find very little difference, if any. Bread made in this way is nice for lunches or picnics. It should always be cut thinly and retains its moisture much longer than white bread. Children should be encouraged to eat whole wheat or graham bread, as it contains essential elements for bone development which are eliminated in making white flour.

I used to make graham bread with yeast, taking a portion of the white sponge and stirring it thick with the graham, but our men did not like it. I noticed that they were always ready to dispose of gems, hot or cold, so conceived the idea of making it in that way, with the result that they prefer it to white bread.

It is a puzzle that confronts every housewife at regular intervals, what to get to eat. To a family fond of salads they constitute a great help-out in the bill of fare.

An egg salad is almost invariably relished for supper. It is hearty food, too, and more "fillin'" than some supper dishes. To make it, boil the necessary number of eggs very hard and drop into cold water. Remove the shells and slice crosswise into a suitable dish. Have ready a dressing made of one-half cup vinegar, one teaspoonful (scant) mustard, same of flour, yolk of one egg and lump of butter size of small egg. Stir the other ingredients together and pour the vinegar scalding hot over them. Stir smooth and place over the fire to boil up. Then remove and set away to become perfectly cold. Pour the dressing over the sliced eggs and serve. A very pretty dish is made of this by serving each helping of the salad on a crisp lettuce leaf, arranging the leaves upon a platter. The dressing should be quite thick so it will remain in place and not run off the leaves upon the platter.

Another nice supper dish made of

that standby of the farmhouse larder, eggs, is made by boiling and slicing the eggs as for the salad and serving them in a cream gravy or white sauce. This is of course served hot, and is a dish that is usually passed around the table twice every time it appears, for everybody wants a second helping.

One thing more, a dessert this time, which may be new to someone. Take as many cups as there are members of the family, and into each drop a great spoonful of raspberry jam. On top of this place a rather thin layer of rich biscuit dough and steam or bake until done. Invert neatly an equal number of saucers and serve with whipped cream, or plain sweetened cream.

OUR EXCURSION.

Several inquiries have been received by the Household editor from farmers' wives who are contemplating taking the trip to Mackinac in company with the Michigan Farmer people Aug. 22.

Some are asking about matters of dress. One lady asks, will traveling dress, with shirtwaist and a mackintosh, be sufficient, aside from necessary toilet articles.

To this we say, yes, although lacking the mackintosh any other suitable wrap may be substituted. Lake breezes are proverbially cool and some protection is usually needed.

We hope none of our friends will stay away on account of any fancied deficiency in their wardrobe. The woman who is equipped with shirtwaist and skirt, sailor hat, or whatever hat she has, will be as well prepared for having a good time as the one with the bran new suit, and probably much more comfortable. We are going in for a good time and clothes are a secondary consideration. If John doesn't want to get into a "boiled" shirt and stand-up collar, let him go as he pleases. The main thing is to go; don't bother about the clothes.

Some have asked about taking lunches. This will be perfectly feasible and no doubt many will do so this year. Anything to supplement the food taken can be purchased on the boat, such as tea, coffee, milk, fruit, etc. If you have not received one of the circulars describing the trip, write to the Michigan Farmer office at once for it.

A MICHIGAN WOMAN IN COLORADO.

My Dear Mrs. Rockwood:—For the first time since I can remember I am taking a vacation which is truly a rest, and this has given me a chance to call up some of the old resolves and to fulfill them, i. e., write to the Household.

We came to Denver June 21, to attend the great biennial meeting of the General Federation of Women's Clubs, and a most inspiring though wearying week it was. Three meetings daily, with receptions, dinners, garden parties and excursions sandwiched between and the thermometer ranging from 90 to 100 by daylight made it a hard week.

Michigan was represented in the convention by twenty-two delegates, and on the program by three speakers and two presiding officers at department meeting. The new recording secretary is Mrs. Emma A. Fox, of Detroit, ex-president of the Michigan State Federation of Women's Clubs.

The General Federation of Women's Clubs has a great work to do. Women of means and leisure, through its influence, will more and more give themselves to service for others; the barriers between rich and poor will tend to disappear; the local woman's club, while developing in a better and truer way the individual woman, will stand more and more as a power for usefulness in its locality through the influence of the General Federation of Women's Clubs. It was a great meeting, representing every part of the country, and every line of progress.

We are spending a couple of weeks now at the Colorado Sanitarium located at Boulder, and most welcome is the peace of the place, the beauty of the surroundings within and without and the invigorating air of this altitude after the strain of the hot business week in Denver. I am taking such a rest as I never knew before and with it the experience of being bathed, kneaded, rubbed, patted, spatted, coconut buttered, "electrocuted" (as my daughter, who is with me, denominates the electric treatment here), fomented,

etc., etc., by the kindest, gentlest, sweetest nurses in the world. I am heartily in love with the place. It is a philanthropic institution, incorporated under the laws of the state of Colorado. One of the provisions is that no dividends shall ever be declared. Any receipts above the needs of the present institution will be used to enlarge the work. It is really an outgrowth of the great Battle Creek Sanitarium and the methods of both institutions are the same, though there is no financial connection between them. The president of the board of trustees and superintendent of the sanitarium is Dr. W. H. Riley, who was for fourteen years with Dr. Kellogg in the Battle Creek work. Dr. Riley is a skilled physician and scientist. He writes for the leading medical journals of the country and is the author of many valuable pamphlets. He has been asked to take the chair of mental and nervous diseases in the medical department of the University of Colorado next year, which will make his life more than ever a busy one.

The Sanitarium is located on a tableland at the foot of Mt. Sanitas and at the entrance to the Rockies. The views are fine. On one side of us mountains, on the other tablelands, the city of Boulder, of which we have a birds-eye view from this elevation, Colorado State University, and beyond all, the great plains. We have such broad views here that I know I shall rebel more than ever to be shut out from the sky and green fields by houses and trees when I return to Michigan. I wonder if farmers' wives realize the beauty of the outdoors which is spread out before them unhindered by the houses and shade trees of the towns and cities? My early life was spent upon a farm but I had to be deprived of it to know the blessing of the great open-spaced out-doors.

The dry, balmy, invigorating air of this altitude, with the three hundred and sixty-five days of sunshine of Colorado, make this a very desirable place for pulmonary troubles. These favorable conditions, combined with the drugless and rational treatments given here, which are the best known to science, make it a physical Mecca to people suffering from lung trouble, and from nervous trouble as well. So carefully are the sanitary conditions guarded that one is really safer from contracting pulmonary trouble here than almost anywhere else. Every one who coughs has his pocket cuspidor and the sputa is regularly burned.

Yours sincerely,
Boulder, Col. BELLE M. PERRY.

HOW TO REMOVE DANDRUFF.

"One of the principal causes of dandruff," says a noted hair specialist, "is a lack of cleanliness." The dust and perspiration clog the pores, and cannot be entirely removed by combing or brushing. It gives an untidy look to the hair, and, if allowed to remain, causes it to fall out. The first step necessary to remove the dandruff and get the scalp in good condition is to wash it thoroughly. Use soft water, heated until it is a little warmer than new milk, and dissolve a little powdered borax in it. Wash until the head is clean, using enough soap to make a good suds, then rinse with clear water and wipe with a towel. When it is dry rub a little pomade or vaseline into the roots to supply the oil that was removed by washing. It is not necessary to oil the hair at any other time.

After the hair is clean, keep it so by protecting it with a dusting cap while sweeping, taking up ashes, and doing other work of that kind. Brush it every night to remove the dust of the day, dividing it in two parts, and allowing half of it to fall over each shoulder. It should hang loosely an hour or two each day if possible, to allow the air to circulate freely

through it. Dissolve one ounce each of gum camphor and borax in a quart of hot water and apply a little of the solution to the roots of the hair once or twice a week, with a soft sponge. Borax is excellent for the hair, cleaning and softening it wonderfully. A thorough washing should be given it once a month.

E. J. C.

RED ANTS.

A troubled sister asks how she may rid her pantry of tiny red ants which she traps by millions, but makes no headway against the oncoming horde. She has tried camphor, cayenne, cloves, tansy and hot soapsuds, as well as a heavy chalk line, but all to no avail.

This same query appears from season to season from some housewife who is annoyed with these troublesome insects. Last year three remedies were suggested, differing from those tried by your correspondent. One lady wrote that corrosive sublimate solution washed over the legs of tables, cupboards, etc., where food is kept, will keep the pests at bay. Renew the wash occasionally. It is deadly poison and the bottle should be kept out of the reach of children.

Another remedy suggested consists of tracking them to their point of entrance and baiting them there with bread spread with lard. Whenever you pass that way knock them off on to a shelf and wipe them up with a damp cloth. This keeps them away from the food at least, although after following it for weeks no apparent diminution in numbers was noticeable.

A trap of sweetened vinegar has been recommended. Put it into a bowl and cover with a piece of paper. They will flock to it in swarms and be captured. Still another way is to trace out their nests and pour hot water upon them.

These mites are a great nuisance, and difficult to effectually destroy.

LARGE FAMILIES.

I wish to say a few words in favor of the large family. I am aware that my theme is an unpopular one, since large families are not the fashion now. Admitting that in many cases a large family does not seem desirable, still, my observation leads me to believe that a much larger proportion of children reared from large families become intelligent, reliable and respectable citizens than those from families of only one or two. I consider the main reason for this to be the necessity for labor in a large family whose means are limited, obliging the parents to bring their children up to industrious habits, with scant luxuries. This early training, making them thoroughly acquainted with the value of both time and money, leaves small room in their lives for the influence of bad associates.

In smaller families where no such necessity exists, the parents, through a mistaken kindness, often do all the work themselves, and allow the children to follow their own sweet wills, and work, or not, as they see fit.

Then, having so few to provide for, they often indulge them unduly in dress and amusements, until, in very many cases, they grow up with idle, aimless lives, and we all know what the poet says Satan finds "for idle hands to do."

Employment of some kind is the salvation of children, as well as grown up people.

M. A. S.

For constipation try drinking hot water plentifully before breakfast. Nearly all fruits are beneficial for this complaint.

For carpet bugs try wetting bits of red flannel in Paris green water and placing them around the edges of the carpet.

ENAMELINE

THE MODERN

STOVE POLISH

Quick Shine
Little Labor
No Dust
No Odor



NO OTHER COMPARES WITH IT. IT'S THE BEST.

DOING UP FINE SHIRTS.

A young housekeeper writes that she is having trouble with fine shirts. She likes to see them look as they do when they come from a laundry, but cannot get them stiff enough. An appeal is made to any who have been successful in accomplishing this end. Will they report their process for her benefit?

It is essential that the pieces be starched twice. Starch when hung on the line, using cooked starch (not too thick) and rubbing it well into the cloth. Have the starch as hot as the hands can bear. Wring out, shake and pat free from wrinkles and hang up to dry. When ready to iron, dissolve some laundry starch in cold water—about a tablespoonful to a pint—add half a teaspoonful of powdered borax and wet bosoms, collars and cuffs thoroughly in it. Wring out and fold at once, ironing in about half an hour.

Linens starched in this way is very stiff, but the peculiar glossy surface of regularly laundered linen will be lacking. That is due to some preparation used with which the public is not acquainted. A very good polish can be obtained, however, by thorough rubbing after the linen is dry. Use the heel of the flat-iron, or what is better, a regular polishing iron. A small piece of gum arabic dissolved in the hot starch add to the stiffness, as does also the borax in the cold starch. Some of the new brands of laundry starch contain ingredients which impart a much better polish to the linen than the old-fashioned kinds.

On general principles it is advisable to send fine shirts to the laundry instead of trying to do them at home. If it is thought they wear out faster by having them washed away from home, this part of the work may be done before they are sent. Certainly it is scarcely possible to do the pieces up at home in such an immaculate manner as most men, particularly young men, desire, and it saves a great deal of time and annoyance to put them out as suggested. If any of our readers can offer any further suggestions by way of assistance to our correspondent we shall be glad to hear from them.

CONTRIBUTED RECIPES.

Warm Slaw.—Cut a nice fresh cabbage into shavings and put into a deep earthen dish. Cover it closely, and set it on the top of the stove, or in a rather cool oven for half an hour till it is warm all through, but do not let it get so heated as to boil. Then make a dressing of a quarter of a pound of butter, half a pint of warm water, a little salt and cayenne. Boil this mixture in a sauce-pan, and pour it hot over the warm cabbage; send it to table immediately. This is a French method of dressing cabbage.

Meat Pie.—Place a thick, rump steak, well larded, in the bottom of a sauce-pan. Cut some bacon in small pieces and lay over the steak, season with pepper and salt, pour over this a little water and stew until tender before putting into the pie. Make a rich paste and put a thick lining around the sides and on the bottom of a baking dish; put in the meat and gravy, adding a piece of butter the size of an egg. Put on the top crust, and bake until it is a light brown. Serve in dish it is cooked in.

Apple Water Ice.—Pare and core some fine juicy apples, not too tart. Cut them in pieces into a preserving-kettle with enough water to float them. Boil until they are reduced to a pulp, then strain; and to each pint of apple water add half a pint of good sugar syrup, the juice of one lemon, and two tablespoonfuls of cold water; when this is entirely cold put it to freeze.

Roll Jelly Cake.—Take three eggs, beat the yolks with one cupful of powdered white sugar and three tablespoonfuls of sweet cream; beat the whites to a stiff froth, then beat them thoroughly with the yolks and sugar; sift one heaping teaspoonful of baking powder with one cupful of flour and add to the other ingredients; stir well and bake immediately in a moderately heated oven. While hot remove from the pan and lay on a cloth wet with cold water. Spread with jelly and roll quickly. Sprinkle with powdered white sugar.

Custard Pie.—Four eggs well beaten, one quart of sweet milk, and half a cupful of granulated sugar. Bake with under crust only. Custard pie is best when cold.

CLARA.

Miscellaneous.

For The Michigan Farmer.

MICHIGAN.

A Byronic Tribute.

BY BYRON WORK.

Know ye the land of the hemlock and cedar,
The grand sugar maple, the towering pine;
Where vox populi is the ruler and leader,
With the Lord's will to sanction in favor divine;

Where the clear air so bracing with ozone is laden,
And the bright crystal lakes and the forests sublime,—

Where the beautiful rivers and health-giving fountains,
Bright cities and homesteads, and "plains land" and mountains,
With balsamic flavor and bright sparkling streams,

Where Indian summer's soft somnolent beams
O'er visions of beauty wake poetic dreams;

And life is worth living in health without measure,
And lumber and saw-logs afford ample treasure—

With potatoes and peaches and blue huckleberries,
Plums, apples and currants and bright crimson cherries;

With the farm's staple products in row a long line,
And salt and the treasures that come from the mine—

And the hotels luxurious, and tourists so curious,
And politics furious—and occasionally spurlous—

And—oh! change the subject a picture to view
Of the pink and white maidens who look you right through;

And the rosy-cheeked matrons who look divine,
And repel the ravages of old Father Time,

And manhood is noble and posted and brave,
And o'er them "Old Glory" in freedom doth wave.

'Tis the land 'twixt the lakes—'tis the clime where the sun
Divides with the snow in the annual round run,

And the green shades of summer with balsam perfume—
The scene that in winter bright "back logs" illumine,—

That land which in progress is found in the van,
Is Michigan always—is my Michigan!

You may sing of your lands in the far southern clime,
And paint their bright features in figures sublime;

But the land whose endowments all others outspan
Is Michigan, Michigan, my Michigan!

THE LOVER'S QUEST.

BY ERNEST GLANVILLE.

Author of "The Lost Heiress," "The Fossicker,"
"A Fair Colonist," "The Golden Rock," &c.

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(CONTINUED)

SYNOPSIS OF PREVIOUS CHAPTERS.
CHAPTERS I. & II.—Miles Venning, junior partner in the house of Lorimer & Co., Birmingham, receives an order for 2,000 Martini-Henry rifles and 500,000 rounds of ball ammunition, the whole to be delivered by a trusty agent at Zanzibar. The order is signed "R. Mark Stern-dale." The name reminds him of an acquaintance he struck up with a young girl of that name years ago and her father whom he had lost sight of, and he decides to deliver the goods himself in the hope of meeting them again. At Zanzibar the rifles are taken possession of by a man named Stoffel, and he accepts the hospitality of an Arab called Abdol. He, however, becomes suspicious of his surroundings, and comes to the conclusion that he has been trapped.

CHAPTERS III. & IV.—Venning's experiences with the Arab Abdol convince him that he is in the latter's power. He is, through fear of death, compelled to sign an order for a number of arms and ammunition on his own firm at Brighton. He tries to find a means of escape, but the servant he has given him, Hans, tells him there is no chance of that, and moreover he is shown a tiger in a cage, which is put upon the tracks of slaves trying to escape. Venning is convinced that he has become the victim of a band of slave dealers.

CHAPTERS V. & VI.—After going through a variety of alarming adventures, Miles resolves to escape from his tormentors, and enlists Hans in the work. Under the shadow of darkness Miles regains the rifle of which he had been dispossessed and awaits developments.

"Mash Allah!" exclaimed the sentry, as he swung round, but before he could make a step forward there rang out, almost at his side, the horrible laugh of a hyena, and as the man sprang aside with a bound, Miles slid gently to the ground, and slipped along the cliff.

There was a hubbub from the circle, One man flung a firebrand, and some of them laughingly chaffed the sentry. Miles waited anxiously for a few minutes, then found his way after some difficulty to the hut, where Hans had already preceded him. The little man was almost weeping.

"My baas, I did think it was over when that bullet dropped, but so I

went on my hands and laughed, so as the wolf come."

"It was well done, Hans, and saved me."

"Ja, baas. It was old Hans made that noise, laughed, so as the wolf laughs."

Miles entered the hut for his rifle, which he at once loaded and then rejoined Hans to decide upon the next move. They were armed, that was a great thing, but the very success of their efforts rendered their position hopeless if they did not make good their escape that night.

CHAPTER VII.

"Hans, have you any plan? You have lived here among these men, and should know their habits."

"There is no way out, sieur, but by the passage, and the men there they do not sleep for the spirits."

"Spirits?"

"Oh, a many spooks baas—from the holes, and the water, and the bushes; many devils that come in the night to frighten any man who is alone. Oh, yes. They talk of them always, and at times they make much noise to frighten the spooks."

Miles picked up the white garment he had tossed aside.

"If I held this on the rifle, Hans, and you made a noise, would the guards down in the dark there take it for a spook?"

The Hottentot drew a long breath.

"Mawoh, baasie, you have got it sure, allevare! Yes, I will cry deep in my belly, and they will run. It is good."

"You think so?" said Miles, doubtfully.

"Oh, yes; dey plenty bang for the night things. Come, now, baas, before the early cold come."

They crept off down the valley, guided by the shimmer of light on the thin stream that found its way through the gorge where the guards were posted. The more Miles dwelt on the "plan" the more childish it appeared, until, when the dark walls again loomed up close before him, he was prepared to abandon the trick. Hans, however, vehemently maintained that it was the only plan that would succeed, unless they made a fight for it, and finally Miles prepared to build up the ghost. All he required was a stick to lash across the barrels and to form the arms. This was soon found, and the white robe was carefully fixed, and certainly looked ghostly enough as it fluttered in the air. They arranged to advance as near as they could to the passage without being detected, when Miles was to lift his banner on high, and Hans, crouching behind, was to howl. If the trick did not fall, they were to try and slip through in the dark, and if opposed, fight.

Slowly they crept on, foot by foot, guided by the glow of a small watch-fire inside the gorge, and Miles was preparing to hoist his ghost when there rose a sudden savage roar, followed by a heavy thud.

"The tiger, baas," said Hans, in a thrilling whisper, "he smells us. Now they will find you have left the hut. Quick."

The guards were calling loudly to each other, and a second later, the report of a rifle rang up the valley behind.

Miles lifted his rifle, the white robe fluttered like some giant's wraith, and Hans emitted a long, low, blood-curdling howl, terminating in a hollow groan. Before he had finished the leopard roared again, and amid this awful din Miles stepped into the mouth of the ravine and into the view of the guards, who had all rushed together and stood peering into the darkness, their nerves all quivering.

"Sheitan!" they cried, and as the apparition appeared two of them hastily fired, the others pressed back against the rocks, and then Hans howled again, finishing off with a fiendish laugh. This was too much for the superstitious Arabs, and with a yell of terror they fled, dropping their rifles. Hans went after, laughing hideously, and Miles followed at a run. Once out of the ravine they stopped to listen, and they could hear the terrified guards still flying and calling wildly on Allah and the Prophet, while echoing through the gorge came the clamor of the armed mob behind.

"Which way now?"

Without a word Hans stopped and lifted Miles' right foot, then the left, finally smacking his own bare feet.

"Now," he cried, "this way," and struck up to the right, where the sides

of the valley sloped at an easy gradient. Up they went at their best speed, until when the top was reached Miles stopped to get breath, and heard below the volume of noise increasing to a perfect roar of rage.

"What did you do to my feet?"

"They will loose the tiger just now, and I smeared Arab grease on so he will miss the spoor. Hear, baas, the tiger; already he is loose."

The cry of the fierce brute, this time more of a scream than a roar, rose high above the other sounds, and Miles needed no other spur, but dashed on after the Hottentot, who turned sharply to the right. Another desperate burst through thorns, which lacerated their skins, brought them to a wall of rock.

"We must climb," said Hans, breathlessly, as he moved about feeling the rocks. "Here is a spot," he said, and they struggled up a narrow cleft, clutching fiercely, with their teeth shut, and trusting blindly to luck to bring them out to a firmer footing. Safely, however, they surmounted this obstacle, and threw themselves on a level stone to regain their wind. Then a savage cry from out the pitch darkness, accompanied by yells from human throats, almost as fierce, spurred them on once more, but this time their way lay through dense wood, and they had to go slow, but as they struggled on, the noise of the chase died out.

"Good!" said the Hottentot, "they have gone down the river;" and they went on more quietly for an hour, when the struck a small stream, and Hans sat down.

"We can sleep now, sieur. Mawoh. Bat was well done."

"Do you know where we are?"

"We are near the place we left just now."

"Not in the valley again?"

"Neh, baas, no; on the rocks above. See, they will not think we have turned back, but will go on. Oh, yes, I have made that plan long ago—if I got outside the place, to climb back to the top. Hans is a slim" (sly) "kerel. Sleep, my baas; when the light comes they will seek for spoor, and we must have all eyes open."

The old fellow hereupon doubled himself up in some garment he had snatched up at the last moment before flight, and was soon asleep. Miles, however, sat clutching his rifle and listening to the faint, far-off murmur of the hunt, before he snatched a few hours' sleep. They were afoot again before the early dawn, and when the sun had been up an hour they had placed several miles between them and their enemies, though the course taken naturally led them deeper into the country.

When they took their rest they found that in their anxiety to escape they had forgotten to bring away even an ounce of food, and as their hunger increased they turned their pockets inside out. Miles produced a handful of dates from his, while Hans discovered a small stick of biltong, a cake of Cavendish tobacco, a flint, a thong of buckhide, and the fragment of a letter.

[Continued on page 112.]

"Silver Plate that Wears."

Your Spoons

Forks, etc., will be perfection in durability, beauty of design and brilliancy of finish, if they are selected from patterns stamped

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Remember "1847"—take no substitute. There are other Rogers, but, like all imitations, they lack the merit and value identified with the original and genuine. Made only by

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Miles picked up the scrap of paper and smoothed it out, and the word that first caught his attention was "Stoffel."

"Where did you get this?" he said, holding the scrap up.

"In the coat, baas."

"And the coat?"

"I picked him up in the place of the guns. Allevarel!" the old man exclaimed, as he held the coat up and examined it. It was a stout coat of corduroy, bearing signs of much wear. "I know him well; it belongs to that duivel, Stoffel."

"Do you know that man?" asked Miles, quietly.

"Stoffel! He is jes so as a tiger—ja. He my baas in the old land, and for I lose his oxen when the night was dark, he sent me to the slave-men with a briefje—verdam—and the slave-man put my neck in the yoke."

"Where was that?"

"By the big river, much far away. Bymby I get back to the big river; bymby I find dat same Stoffel."

"Is he a slave dealer?"

"Neh, baas, he shoot; and he trade for elephant teeth; and he sell guns, and brandy-wine, all sorts to the Kaf-firs."

"I suppose he has white men with him?"

"I don't think so. He is a slim kerel, and what he know he know, but his boys don't know. I did hear, all the same, der was one place in the bush where he build a house, and the mens said he would bring one of his wives there."

"One of his wives?"

"Ja, baas; he jes the same as the Arab or Kaffir chief, and he have plenty wives, all colored. Bymby I go back to the big river, and bymby I see dat Stoffel, and I hit him so, bliff, on the kop," and Hans made a cut with his sword.

"I should like to see this Stoffel myself, Hans, for it was he who got me into this trouble."

"How?" cried Hans, his little eyes sparkling like a snake.

"We must get back to the port and take a ship to the river, Hans, and when we get there you must help me track him down."

"Ja, sleur; ole Hans is a big hunter. He knows all the country there, but it is far, far, and in between there are a many Kaffirs."

"We cannot be more than five days from the sea, Hans, and once there we will find a ship to take us. We must work south a little, and then turn round and make straight for the coast, taking a line that the Arabs are not likely to cross."

They divided the little store of food, and Hans hunted out a few grubs and roots, which he ate. In the afternoon they turned south, keeping a sharp look out as they went, and Hans on the way marked down a dense swarm of small partridges about a pool and knocked over several with a stick. Before dusk they took their bearings, and turned due east, keeping on until well after sunset, when they built a small fire and roasted the birds. After the meal, they cut thorn branches and made a scherm as a shelter, both against the wind and wild beasts, for the jackals had begun their complainings as soon as darkness set in, and later on, the hyenas had joined in. The birds that fly in the night, too, were calling overhead, and in the silent pauses there was a faint stirring in the air, the echo of some far-off sound, where the breakers of the Indian Ocean were beating on the shore. Miles was shaping out the future, and his mind busy with the story Hans had told him concerning Stoffel, had entirely left the Arab sheikh out of his calculations. It seemed to him, indeed, as if a long interval had gone by since he was detained in the valley.

"Hark to that, baas," said Hans, in a startled whisper.

"What? It is a jackal howling."

"Neh, sleur, listen! There!"

"I can hear nothing," said Miles, impatiently.

The Hottentot sat up, with his head bent forward, and his eyes closed, while Miles sighed, and resumed the thread of his speculations.

"I know it," said Hans, jumping up. Miles stood up, too, for he saw that his companion was really alarmed.

"There again it comes, and nearer. Does baas hear now?"

"I hear a cry far off."

"My Gott! It is the tiger!"

"The tiger! What, not that brute from the valley?"

They stood listening, and then there

broke out the weird howling of a pack of jackals, followed by deep silence, through which again there sounded the hum of the sea.

"Let us run, baas."

"No, let us stand. We are match for one brute."

"If it comes alone, yes," said Hans, doubtfully, as he drew his sword. "Still it is dark, and if it springs into this scherm we would have no room. Let us get away by some rock." And he kicked the thorns away, flinging them on the fire. "So, if we stand off in the dark we can see him come into the light."

They moved off to the shelter of the rock, and watched the flames slowly quiver up among the piled material, while the cry came nearer and fiercer, in a series of short, savage yelps. Presently, however, as the fire took hold and shot up, the cry ceased.

"He is running still now," said Miles, as he thrust his rifle over the rock.

"Maybe there are men with him who have called him back."

(To be continued.)

The Markets.

WHEAT.

The principal features of interest in the wheat market the past week were the light receipts and the returns from the various states in which threshing was being carried on. Spot wheat was very scarce, and it is safe to say will remain so if values do not improve, as farmers are not willing to accept current prices. What the final outcome may be is a knotty problem, but it is quite apparent that free selling now would surely depress prices below their present range. From latest reports it is doubtful if spring wheat turns out as well as anticipated, while in the winter wheat states early estimates have not been equalled except in Michigan and Indiana. It is likely that prices will decline, however, as soon as deliveries increase to any great extent. So far the foreign demand has kept up well, and with the home demand from millers, prices are fairly steady.

The following table exhibits the daily closing sales of spot wheat in this market from July 20 to August 11, inclusive:

	No. 1	No. 2	No. 3
	White.	Red.	Red.
July 20	75 1/2	77 1/2	75
" 21	75 1/2	77 1/2	75 1/2
" 22	74 1/2	76 1/2	74 1/2
" 23	72 1/2	74 1/2	73
" 24	69 1/2	72 1/2	69 1/2
" 25	65 1/2	69 1/2	66 1/2
" 26	64 1/2	67 1/2	64 1/2
" 27	65	68 1/2	65 1/2
" 28	64 1/2	67 1/2	64
" 29	65	67 1/2	64
" 30	64 1/2	67 1/2	64
Aug. 1	64 1/2	67 1/2	64
" 2	65	67 1/2	65
" 3	66 1/2	69 1/2	67
" 4	69	70 1/2	69
" 5	68 1/2	71 1/2	69 1/2
" 6	67 1/2	70 1/2	70 1/2
" 7	67 1/2	72 1/2	69 1/2
" 8	67 1/2	72 1/2	69 1/2
" 9	67 1/2	72 1/2	69 1/2
" 10	69	72 1/2	70 1/2
" 11	68 1/2	72 1/2	70

The following is the record of the closing prices on the various deals in futures each day during the week:

	Aug.	Sept.
Friday	69 1/2	68 1/2
Saturday	71	69 1/2
Monday	72 1/2	70 1/2
Tuesday	71 1/2	69 1/2
Wednesday	72	69 1/2
Thursday	70 1/2	68 1/2

The visible supply of wheat in the United States and Canada on Saturday last was 8,254,000 bu, as compared with 9,065,000 bu the previous week, and 17,650,000 bu at the corresponding date in 1897. The decrease for the week was 830,000 bu.

France will this season have just about enough wheat for home consumption. Last year she imported over 30,000,000 of bushels.

The Russian crop is not as good as looked for, being irregular in yield and quality.

An official of the Northwestern Railway, who has been out over the line, says: "Crops along the line of our road are surprisingly good, and much better than anticipated. In South Dakota, where damage was reported recently, there are few traces left, and the corn there will be a bumper crop. In Minnesota threshing is under way and the grain is turning out abundantly and grading well. An immense tonnage is in sight."

Michigan and Indiana are the only winter wheat states which have a good wheat crop. All others are running below early estimates.

The world's visible supply of wheat decreased three and three-quarter millions of bushels last week—a remarkable decrease for this season of the year. The correspondent of the Daily Trade Bulletin, at Winnipeg, Man., under date of August 4, says: "A little wheat cutting will be started at once, and in a fortnight, with dry, warm weather, will be in full swing. The prospect at this date is generally very good and if nothing adverse happens, Manitoba and the northwest may be counted on for 40,000,000 bu wheat this season."

The Kansas wheat crop is gradually decreasing as threshing advances. Early estimates of a 100,000,000 bu. yield have got down to 40,000,000 bu, which is probably about correct.

Total stocks of breadstuffs in Europe and afloat therefor on August 1 were equal to 44,480,000 bu, against 59,530,000 bu on July 1, and 38,000,000 bu on August 1, 1897. Total supplies of breadstuffs in America, in store in Europe and afloat therefor on August 1 were equal to 70,103,000 bu, against 86,774,000 bu on July 1, and 77,900,000 bu on August 1, 1897. Aggregate supplies in all positions are 7,797,-

000 bu less than reported one year ago and 54,190,000 bu less than reported two years ago.

The Minneapolis Record says: "The last two days' rain have caused a cessation in the harvest work and promise to do some injury to grain, especially in quality, even if we have no more rain. Probabilities, however, indicate that unfavorable harvest weather has not ended, which has caused a feeling of firmness in the market, with prices tending strongly upward. With the great shortage there is in local supplies it is realized that an extended rain now or even patching weather would delay threshing and put the grain in condition that would make it for a long time unfit for milling."

DAIRY PRODUCTS.

BUTTER.

The receipts of good butter continue unusually light for the season, with the result that prices are gradually strengthening. The late rains will undoubtedly help pastures materially, and will have an influence in increasing the flow of milk. The higher prices ruling for butter will also induce many farmers to pay more attention to its production than earlier in the season. The great difference in the price paid by the consumer and that obtained by the butter-maker is a serious handicap to the business. The difference is never less than 50 per cent on choice butter, and this is a large factor in turning the attention of consumers to substitutes. The dealer does not suffer from this state of affairs, as he is generally ready to sell substitutes if the true product is beyond the means of the purchaser. There has not been any change in quotations since a week ago, but a slightly lower grade will now sell for outside figures. Quotations are as follows: Creamery, 18 to 19c; fancy dairy, 16 to 17c; fair to good dairy, 13 to 15c; common dairy, 11 to 12c; low grades, 9 to 10c. At Chicago values are just about the same as a week ago, with the better grades very firm and in good demand. Quotations in that market range as follows: Creameries, extras, 18c; firsts, 17 to 17 1/2c; seconds, 13 to 15c; dairies, extras, 16 to 16 1/2c; firsts, 13 to 14c; No. 2, 12 to 12 1/2c; ladies, extras, 12 1/2 to 13c; packing stock, 11 to 11 1/2c per lb. The New York market is hardly so firm in tone as a week ago, but no change has been made in current prices on any of the grades. The advance in values is thought to have reached a stopping place for the present, but the weakness apparent seems to be more the result of defects in the receipts than from an over-supply of really choice butter. These defects are largely owing to the hot weather, and when they disappear we shall expect a general strengthening of the market. Quotations in that market on Thursday were as follows: Creamery, Western, extras, per lb, 19c; do, firsts, 17 1/2 to 18 1/2c; do, thirds to seconds, 14 1/2 to 17c; do, State, extras, 18 1/2c; do, firsts, 17 1/2 to 18c; do, thirds to seconds, 14 1/2 to 17c; Western, June, extras, 19c; do, firsts, 18 1/2 to 18c; State dairy, half-firkin tubs, fancy, 17c; do, firsts, 15 1/2 to 16c; do, thirds to seconds, 13 1/2 to 15c; State dairy, tins, etc, 13 1/2 to 15c; Western imitation creamery, extras, 15 1/2 to 16c; do, firsts, 14 1/2 to 15c; do, seconds, 14 1/2 to 15c; Western dairy, finest, 15c; do, thirds to firsts, 12 1/2 to 14c; factory, June, extras, 14c; do, firsts, 13 1/2c; do, current packed, finest, 13 1/2c; do, seconds, 12 1/2 to 13c; do, lower grades, 11 to 12c.

CHEESE.

Our local cheese market is unchanged, both in tone and range of values. It is quiet, but steady. Quotations are 8 1/2 to 9c for the best full creams, with only a fair seasonable demand. At Chicago conditions are about the same as in this market, and no changes have occurred in the range of prices since our last report. Quotations in that market are as follows: Young Americas, 8 1/2 to 9c; twins, 7 1/2 to 8 1/2c; cheddars, 7 1/2 to 8 1/2c; Swiss, 8 1/2 to 11 1/2c; Limburger, new, 6 1/2 to 7c; brick, 5 1/2 to 7c. The New York market has shown some weakness since our last report, and we note fractional declines in several grades. There is a firmer feeling apparent within the last day or two owing to unusually light receipts. Small sizes have shown the most weakness. The export demand is very good. Quotations in that market on Thursday were as follows: State, full cream, large, colored or white, fancy, 7 1/2c; do, colored or white, choice, 7 1/2 to 7 3/4c; do, good to prime, 6 1/2 to 7c; do, common to fair, 6 1/2 to 6 3/4c; do, small, colored, fancy, 7 1/2c; do, white, fancy, 7 1/2c; do, good to choice, 7 1/2 to 7 3/4c; do, common to fair, 6 1/2 to 6 3/4c; light skims, small, choice, 6 1/2 to 6 3/4c; do, large, choice, 5 1/2 to 5 3/4c; part skims, small, choice, 5 1/2 to 5 3/4c; do, large, choice, 5 1/2c; do, good to prime, 4 1/2 to 5c; do, common to fair, 2 1/2 to 3 1/2c; full skims, 2c.

The Liverpool market is quoted steady at 37s. per cwt. (112 lbs.), for the best white and colored American cheese.

DETROIT PRODUCE MARKET.

Detroit, Aug. 11, 1898.

FLOUR.—Quotations on Jobbers' lots in barrels are as follows:

Straights	3.75
Clear	3.50
Patent Michigan	4.25
Low Grade	3.00
Rye	3.00

CORN.—The visible supply of this grain on Saturday last in the United States and Canada was 17,920,000 bu., as compared with 17,767,000 bu. the previous week, and 16,511,000 bu. at the corresponding date in 1897. Quotations in this market are as follows: No. 2, 33 1/2c; No. 3, 33c; No. 2 yellow, 34 1/2c; No. 3 yellow, 34c; No. 3 white, 33 1/2c; per bu. Market steady.

OATS.—The visible supply of this grain in the United States and Canada on Saturday last was 3,352,000 bu., as compared with 3,440,000 bu. the previous week and 6,551,000 bu. at the corresponding date in 1897. Quotations in this market are as follows: No. 2 white, 26c; No. 3 white, 25 1/2c per bu.

RYE.—The visible supply of this grain in the United States and Canada on Saturday last was 437,000 bu., as compared with 305,000 bu. the previous week and 1,632,000 bu. at the corresponding date in 1897. Quotations on No. 2 were 45 1/2c per bu.

BEANS.—For August delivery, 99c per bu is offered, and for October, 95c.

FEED.—Quotations on Jobbers' lots are as follows: Bran and coarse middlings,

13 1/2 to 15.50; fine middlings, 15c; coarse cornmeal, 14c; cracked corn, 15c; corn and oat chop, 12c per ton.

BALED HAY.—Best timothy is quoted at \$9.50 per ton.

LIVE POULTRY.—Broilers, 12c per lb.; fowls, 7 1/2 to 8c; ducks, 5c; spring ducks, 7c; turkeys, 8 to 9c per lb.

EGGS.—Fresh receipts, 11c per doz; candled, 12c per doz.

HONEY.—Comb, good to choice, 9 to 10c; fancy white, 11c per lb.

PEACHES.—Missouri, \$3 per crate; Michigan, 50¢ to 75¢ per bu.

BERRIES.—Huckleberries, \$2.25 per bu; red raspberries, \$2.50 to 2.75; Lawtons, \$2 per bu.

DRIED FRUIT.—Quoted as follows: Evaporated apples, 8 1/2 to 9c; evaporated peaches, 10 to 12c; dried apples, 4 1/2 to 5c; apricots, 7 1/2 to 12c per lb.

APPLES.—New, quoted at \$1.15 per bbl.

CAULIFLOWER.—Selling at \$1.15 per dozen.

CABBAGE.—New quoted at 50c per dozen. Receipts large.

MELONS.—Watermelons, \$12 to 20 per 100; cantaloupes, \$2 per bbl; osage, \$3 per bbl.

POTATOES.—New State selling at 40¢ to 60¢ per bu. Quality of receipts improving.

WOOL.—Nominal quotations in interior markets are as follows: Unwashed fine, 14 to 15c; washed fine, 19 to 20c; unwashed medium, 19 to 20c; washed medium, 22 to 23c per lb.

HIDES.—Quotations are as follows: No. 1 green, 7 1/2c; No. 2 green, 6 1/2c; No. 1 cured, 9c; No. 2 cured, 8c; No. 1 green, calf, 10c; No. 2 green, calf, 8 1/2c; No. 1 kip, 7 1/2c; No. 2 kip, 8c; sheepskins as to wool, 90¢ to 1.25; shearings, 12 to 20c.

PROVISIONS.—Barreled pork and lard are lower, while hams, shoulders and bacon have advanced. Quotations are as follows: Mess pork, \$10.25 per bbl; short cut mess, \$11; short clear, \$11; compound lard, 5 1/2c; family lard, 5 1/2c; kettle lard, 7c; smoked hams, 8 1/2 to 8 3/4c; bacon, 8 1/2 to 8 3/4c; shoulders, 6c; picnic hams, 6 1/4c per lb; tallow, 3 1/2 to 3 3/4c per lb.

COFFEE.—Roasted Rio, ordinary, 9c; fair, 11c; Santos, good, 14c, choice, 18c; Maracaibo, 20 to 25c; Java, 20 to 30c; Mocha, 25 to 32c; package coffee sold on the equality plan on a basis of \$2.50 to \$3.50, less 75¢ per 100-lb. case in New York.

OILS.—Lined oils are lower; turpentine a little higher than a week ago. No other changes. Quotations are as follows: Raw linseed, 34c; boiled linseed, 36c per gal, less 1c for cash in 10 days; extra lard oil, 49c; No. 1 lard oil, 30c; water white kerosene, 8 1/4c; fancy grade, 11 1/2c; deodorized stove gasoline, 8 1/2c; turpentine, 33 1/2 to 33 3/4c per gal in bbl lots.

HARDWARE.—Latest quotations are as follows: Wire nails, \$1.50; steel cut nails, \$1.45 per cwt. new card; axes, single bit, bronze, \$5; double bit, bronze, \$8.50; single bit, solid steel, \$6; double bit, solid steel, \$9.50 per doz.; bar iron, \$1.35; carriage bolts, 75¢ per cent off list, painted barbed wire, \$1.60; galvanized oil, \$1.90 per cwt.; single and double strength glass, 20 and 20 per cent off list; sheet iron, No. 24, \$2.50 per cwt.; galvanized, 75 and 10 per cent off list; No. 9 annealed wire, \$1.40 rates.

DETROIT LIVE STOCK MARKET.

Michigan Central Stock Yards.

Thursday, August 11, 1898.

CATTLE.

Cattle receipts Thursday, 368 head; from the west direct to butchers, 26; on sale, 32, as compared to 676 one week ago. There is no change to note in quality, being mostly fair quality butchers to stockers. No heavy shipping steers on sale. Market active. All sold early at strong last week's prices; \$4.40 was top price to-day for 22 good butcher steers at 995 lbs. The bulk changed hands at prices ranging from \$3.35 to \$4.25. Fair to good fat cows, \$2.85 to \$3.75; canners and common, \$1.50 to \$2.75; bulls light to good butchers, \$2.75 to \$3.35; stockers, \$2.25 to \$3.55. Veal calves, receipts 104; active at \$5 to \$6 per lb. A few choice brought \$6.12 1/2; milch cows and springers in good demand at prices ranging from \$25 to \$45 each; good fresh young cows would bring \$5.00 per head more; none here.

Lewis sold Mich Beef Co 18 mixed butchers at 74¢ at \$3.90, a fat cow to Black weighing 1100 at \$3.50 and a canner weighing 920 at \$1.50.

Sharp sold Caplis & Co 5 mixed butchers at 64¢ at \$3.40, a stag weighing 910 at \$3.40 and 3 stockers to Farnum at 56¢ at \$3.50. Robb sold Black 3 cows at 90¢ at \$3.30, 10 steers to Mich Beef Co at 81¢ at \$4.20, 7 mixed butchers at 63¢ at \$3.40 and 3 bulls at 103¢ at \$3.00.

Sweet & N sold Caplis & Co 5 cows and bulls at 1.15 at \$3.00 and 5 heifers at 83¢ at \$4.00.

Adams sold Cook 5 heifers at 55¢ at \$3.40, 3 steers to Mich Beef Co at 93¢ at \$4.10, a cow weighing 1,140 at \$3 and 2 stockers to Farnum at 61¢ at \$3.85.

Reason sold Black 10 steers and heifers at 90¢ at \$4.15, 3 cows at 93¢ at \$3.50 and a bull weighing 1,170 at \$3.00.

Ford sold Caplis & Co 6 heifers at 86¢ at \$3.75.

Reason sold Cook 10 mixed butchers at 63¢ at \$3.60.

Hawley sold Farnum 7 stockers at 60¢ at \$3.70.

Haley Bros sold Clarence 5 common butcher cows at 98¢ at \$2.85, 10 light mixed butchers to Schleicher at 57¢ at \$3.35, 4 steers and heifers at 88¢ at \$4.00, also a bull to Farnum weighing 800 at \$2.75.

Kelsey sold June 2 mixed butchers at 75¢ at \$3.60, 2 stockers to Farnum at 66¢ at \$3.65 and 1 do weighing 690 at \$3.75.

Van Buskirk sold Mason 3 stockers at 50¢ at \$3.50, 2 do at 50¢ at \$3.75, 2 (steer and heifer) to Black at 91¢ at \$4.25 and a bull weighing 1,050 at \$3.00.

Dennis sold Black 22 good butcher steers at 95¢ at \$4.40.

Spicer & Merritt sold Farnum 4 stockers at 43¢ at \$3.50; a bull to June weighing 700 at \$3.10, 2 steers at 87¢ at \$4.25, 3 mixed butchers at 60¢ at \$3.50, a heifer weighing 730 at \$3.75, and a bull weighing 540 at \$2.70.

Mayers sold Farnum 6 stockers at 62¢ at \$3.20, 5 cows at 100¢ at \$3.55, and 6 mixed butchers at 73¢ at \$3.85.

Estep sold Marx 3 mixed butchers at 62¢ at \$3.60, 2 steers at 80¢ at \$4.00, a cow weighing 950 at \$2.90; to Sullivan a cow weighing 1300 at \$3.75, and 8 steers at 92¢ at \$4.25; also 3 stockers to Mason at 70¢ at \$3.70.

Sprague sold Mason a stocker weighing 500 at \$3.35, and 2 steers to Caplis & Co. av \$85 at \$4.35.
Baker sold Farnum 4 stockers av 695 at \$3.65, 6 mixed butchers to Black at 741 at \$3.75, 2 do av 880 at \$3.25, and 9 steers to Sullivan av 975 at \$4.25.
Stead sold Sullivan 3 steers av 1066 at \$4.25, and 2 stockers to Fry at 740 at \$3.60.
Haley sold Black 5 mixed butchers av 656 at \$3.70, 2 do av 765 at \$3.75, and a cow weighing 350 at \$3.35.

SHEEP AND LAMBS.

Receipts Thursday, 971; one week ago, 1,452. Quality not very good. Market active. Lambs strong to 10c higher; others steady to strong. Range of prices: Lambs, \$5.00 to \$5.50; good mixed lots, \$4.50 to \$4.75; fair to good mixed butchers, \$3.25 to \$4.50; culls and common, \$2.00 to \$3.00.
Glenn sold Fitzpatrick 48 mixed av 77 at \$4.00.
Sharp sold Mich. Beef Co. 32 lambs av 77 at \$5.50.
Sweet sold Monaghan 46 mixed av 65 at \$4.25.

Kalahar sold Fitzpatrick 31 mixed av 82 at \$4.00, and 34 do av 81 at \$4.25.
Haley Bros. sold Monaghan 35 mixed av \$5 at \$4.00.
Burden sold same 39 mixed av 74 at \$3.75.
Estep sold Sullivan Beef Co. 18 mixed av 88 at \$3.50.
Sprague sold Young 45 lambs av 64 at \$5.40.

Spicer & Merritt sold Fitzpatrick 57 lambs av 62 at \$5.15, and 24 mixed av 98 at \$4.00.
Haley sold Hiser 21 lambs av 64 at \$5.15, and 7 sheep av 113 at \$3.67.
Roe & Holmes sold Mich. Beef Co. 15 common butchers av 112 at \$3.25, 37 lambs av 68 at \$5.50, 8 mixed av 71 at \$4.75, 10 do to Young av 89 at \$4.00, 12 lambs to Robinson av 73 at \$5.50, and 12 do av 67 at \$5.00.
Hawley sold Monaghan 60 mixed av 66 at \$4.00.

Mayer sold Mich. Beef Co. 45 mixed av 71 at \$3.30.

Haley sold same 45 lambs av 66 at \$5.25.

Hoover sold same 41 lambs av 68 at \$5.35, and 33 mixed av 81 at \$4.00.

HOGS.

Receipts, Thursday, 2,956; from the West direct to packers 449; on sale, 2,507 as compared to 2,751 one week ago; quality not very good. Market active, and 5 to 10c higher than last Friday's closing. Range of prices \$3.70 to \$3.92½; bulk at \$3.75 to \$3.85; stages 1-3 off, rough \$3.00 to \$3.25; pigs, \$3.50 to \$3.65.

Belmer sold Hammond, Standish & Co 18 av 192 at \$3.85.

Kalahar sold same 32 av 221 at \$3.92½, and 19 av 183 at \$3.35.

Glenn sold same 119 av 193 at \$3.80.

Sprague sold same 51 av 167 at \$3.80.

Bunnell sold same 84 av 154 at \$3.80.

Burden sold same 61 av 149 at \$3.75.

Sweet & N sold same 45 av 169 at \$3.72½, and 57 av 172 at \$3.72½.

Haley Bros sold same 23 av 168 at \$3.75.

Robb sold same 12 av 139 at \$3.50.

Roe & Holmes sold same 74 av 182 at \$3.87½.

Sharp sold same 72 av 176 at \$3.80.

J. McMullen sold same 70 av 188 at \$3.85.

Reason sold same 77 av 158 at \$3.70.

Roe & Holmes sold same 10 av 219 at \$3.90, and 31 av 195, 33 av 184, 74 av 158, 52 av 170, 35 av 168, and 55 av 179 at \$3.85.

Major sold same 64 av 166 at \$3.80.

Murphy sold same 178 av 164 at \$3.85.

Hoover sold R S Webb 19 av 171 at \$3.80.

Smith sold same 18 av 133 at \$3.65.

O'Connor sold same 48 av 164 at \$3.80.

McLellan sold same 12 av 156 at \$3.70.

Osmus sold same 19 av 162 at \$3.80.

Stoll & Co. sold same 38 av 168 at \$3.90.

Clark sold same 46 av 164 at \$3.80.

VanBuskirk & Lewis sold Parker, Webb & Co 62 av 173 at \$3.85.

Spicer & M sold same 58 av 188, 90 av 184, 26 av 200 at \$3.90, 21 av 202, and 42 av 172 at \$3.85.

Baker sold same 21 av 200 at \$3.90.

Lewis sold same 28 av 173 at \$3.80.

Ackley sold same 73 av 186 at \$3.80.

Hawley sold Sullivan 21 av 146 at \$3.75.

Haley sold same 17 av 139 at \$3.65.

Friday, August 12, 1898.

CATTLE.

Receipts, Friday, 244, as compared with 269 one week ago. The quality averaged better to-day. Market active; good steers and handy butchers strong to 10c higher; stockers steady; \$5.10 was top price for two good shipping steers av 1,730 lbs. and \$4.00 or nine good butcher steers av 1,061 lbs. balance as noted. Veal calves active; top brought \$6.25. There is a good demand for good fresh young milch cows at prices ranging from \$40.00 to \$50.00 each; common rather slow; range, \$25.00 to \$38.00 each.

Stoll & Carter sold Schleicher 4 mixed butchers av 710 at \$3.75; 2 cows to Black av 1,165 at \$2.75, and 3 steers to Sullivan av 906 at \$4.00.

Judson sold Black a fat cow weighing 1,410 at \$3.50.

Hauser sold Black 2 fat heifers av 160 at \$3.35, and 2 steers to Sullivan av 1,060 at \$4.35.

Armstrong sold Sullivan 2 good shipping steers av 1,730 at \$5.10, a fat heifer weighing 1,660 at \$4.50, 1 do weighing 520 at \$3.50, and 5 mixed butchers to Black av 1,070 at \$3.85.

Lowell sold Farnum 8 stockers av 600 at \$3.50.

Talmage sold Mason 3 stockers av 513 at \$3.50, a steer to Sullivan weighing 930 at \$4.25, 4 heifers av 735 at \$3.70, and a bull to Black weighing 920 at \$3.60.

Fox & Bishop sold Black 9 mixed butchers av 916 at \$3.25, a cow weighing 860 at \$2.50, and 16 steers and heifers to Sullivan av 756 at \$3.70.

Weitzel sold Sullivan 2 heifers av 500 at \$3.50.

Miller Bros sold Black 3 heifers av 756 at \$3.50, and 3 cows av 1,033 at \$3.25.

Harwood sold Magee a bull weighing 1,660 at \$3.00, and 2 heifers av 690 at \$4.00.

Spicer & Merritt sold Kamman 21 mixed av 585 at \$3.80.

Rutherford sold Sullivan a bull weighing 1,230 at \$3.15, 2 heifers av 455 at \$3.15, 2 do av 460 at \$3.10, 16 stockers to Farnum av 445 at \$3.50, and 6 do (Jerseys) av 333 at \$2.50.

Roe & Holmes sold Farnum 5 stockers av 695 at \$3.85, 4 do av 665 at \$3.75, 2 cows to Magee av 550 at \$2.75, 5 mixed butchers av 890 at \$3.35, 6 mixed butchers to Marx av 758 at \$3.90, a heifer weighing 520 at \$3.25, 18 steers and heifers to Robinson av 861 at \$4.25, 9 good butcher steers to Mich

Beef Co av 1061 at \$4.55, and 1 do weighing 830 at \$4.55.

Spicer & M sold Sullivan 5 bulls av 1,260 at \$3.20.

McLaren sold Caplis & Co 5 mixed butchers av 1,008 at \$3.15, and 3 stockers to Farnum av 706 at \$3.90.

SHEEP AND LAMBS.

Receipts, 149; one week ago, 342. The few here sold early at prices 10c higher than above quotations. \$5.00 was top price paid for lambs; only a few small lots here. Shippers would have paid 6c for desirable shipping lots to-day.

Roe & Holmes sold Mich Beef Co 33 lambs av 76 at \$5.60.

Lowell sold same 38 sheep and lambs av 61 at \$4.35.

Leidel sold Robinson 12 lambs av 56 at \$5.00.

Frank sold same 11 lambs av 70 at \$5.25.

Weitzel sold Hayes 21 lambs av 64 at \$5.40, and 14 sheep av 96 at \$4.25.

Eddy sold Mich Beef Co 8 fat butchers av 105 at \$4.10.

HOGS.

Receipts, Friday, 2,234; one week ago, 1,144. Market active and strong to 2½c higher than above quotations. \$3.95 was top price, bulk at \$3.80 to \$3.90. All sold, closing firm.

M Hausser sold Parker, Webb & Co 59 av 200 at \$3.87½.

Leidel sold same 55 av 180 at \$3.85.

McMullen sold same 53 av 218 at \$3.95.

E A Hausser sold same 90 av 189 at \$3.87½, and 57 av 186 at \$3.85.

Armstrong sold same 46 av 208 at \$3.90.

Fox sold same 198 at \$3.90.

Astley sold same 76 av 165 at \$3.80.

Talmage sold same 83 av 188 at \$3.85.

Spicer & M sold same 9 av 191 at \$3.85.

Eddy sold same 126 av 186 at \$3.85.

Harwood sold same 127 av 184 at \$3.82½.

Lowrey sold same 49 av 175 at \$3.82½.

Ramsey sold Hammond, S & Co 53 av 188 on P T.

Horne & R sold same 82 av 163 at \$3.80.

McLaren sold same 58 av 188 at \$3.90.

Roe & Holmes sold same 32 av 156, 58 av 173 at \$3.85, 80 av 170 at \$3.87½, and 71 av 167 at \$3.80.

Bullen sold same 54 av 148 at \$3.80, and 60 av 222 at \$3.90.

Cassey sold same 121 av 191 at \$3.95.

Lowell sold same 43 av 178 at \$3.75.

Fox & Bishop sold same 123 av 186 at \$3.92½.

McCleughry sold same 43 av 176 at \$3.90.

Tack sold same 11 av 156 at \$3.70.

Bullen sold Sullivan 14 pigs av 100 at \$3.65.

Trowbridge sold same 10 pigs av 135 at \$3.55.

Talmage sold same 71 pigs av 121 at \$3.62½.

Ramsey sold same 26 av 165 at \$3.80.

Weitzel sold same 39 av 159 at \$3.80.

Miller sold same 64 av 157 at \$3.80.

Fox & Bishop sold same 41 pigs av 118 at \$3.65.

Cassey sold same 38 pigs av 112 at \$3.65.

Purdy Bros sold same 47 av 182 at \$3.85.

During the week Mason & Farnum shipped 4 cars Michigan stockers to Chicago that were bought in this market, and 3 cars bought in the Buffalo market.

For a number of weeks past our packers have been getting the bulk of their hogs from the West, not enough good Michigan hogs coming in to supply them.

The quality of the hogs on sale here for a number of weeks past is very unsatisfactory to all concerned. The shippers complain of the heavy shrinkage—10 to 15 lbs. each; the packers complain of the shrinkage and poor quality of the meat—too soft and flabby. Out of 4,000 Michigan hogs on sale last week 2 loads of good hogs av. 200 lbs. brought \$3.90 and \$3.92½. The average weight of 2750, as taken from the scale books, was 164 lbs., and prices ranged from \$3.70 to \$3.80—average \$3.75, or \$6.15 per head. Had these hogs been put in proper condition before sending to market they would have brought at least \$7.80 each, a difference of \$1.65, or about \$6.50 on the week's receipts. Michigan farmers would have received the most of this, besides having the satisfaction of knowing their stock was in proper condition for the market; and every one interested would be better satisfied. It pays to put all kinds of live stock in good condition before sending to market.

E. S. Ford, of Riga, Mich., bought and shipped home to-day a carload of good stockers av. 500 lbs., costing \$3.75 per 100 lbs.

OUR BUFFALO LETTER.

East Buffalo, August 11, 1898.

Cattle.—Receipts of cattle on Monday last were 5,226, as compared with 5,148 for the same day last week. Shipments were 4,312, as compared with 4,356 the previous week. The market ruled fairly active on Monday, with prices 10 to 15c higher on prime fat steers, a shade higher on good smooth cows and heifers, and about steady for common stuff of all descriptions. Some heavy half-fat steers sold higher, in sympathy with the advance in prime heavy and handy-weight steers. Bulls were in good demand and steady, and oxen ruled higher. The top price for steers was \$5.40, only one lot bringing those figures. A fine lot of Michigan brought \$5.25; they averaged 1,354 lbs. The best lot of butchers' steers were brought from Michigan, and sold at \$5.50 on a weight of 1,013 lbs. A fine Michigan stocker sold at \$3.90 at 4.25, with quite a number bringing \$4.10. A number of Michigan yearlings sold up to \$4.35 at 4.40, and heifers up to \$3.90 at 3.50. The demand for stockers was good for all classes except common scrub stock. Since Monday the market has held about steady, with a good demand for all desirable grades. Quotations at the close on Wednesday were as follows: Export and Shipping Steers.—Prime to extra choice finished steers, 1,400 to 1,450 lbs. \$5.25 at 5.40; prime to choice steers, 1,300 to 1,400 lbs. \$5.00 at 5.20; good to choice fat steers, 1,250 to 1,300 lbs. \$5.00 at 5.10; good to choice fat smooth steers, 1,050 to 1,250 lbs. \$4.80 at 5.00; green coarse and rough fat steers, 1,050 to 1,400 lbs. \$4.10 at 4.50. Butchers' Native Cattle.—Fat smooth dry fed steers, 1,050 to 1,150 lbs. \$4.55 at 5.10; fat smooth dry fed light steers, 900 to 1,000 lbs. \$4.60 at 4.75; light half-fat steers, \$4.00 at 4.40; green steers thin to half fattened, 1,000 to 1,300 lbs. \$4.15 at 4.40; fair to good steers, 900 to 1,000 lbs. \$4.20 at 4.60; choice smooth fat heifers, \$4.50 at 4.70; fair to good fat heifers, \$4.00 at 4.40; light

thin, half-fat heifers, \$3.70 at 4.00; fair to good, smooth, well-fattened butcher cows, \$3.90 at 4.25; fair to good butcher cows, \$3.50 at 3.80; common old shelly cows, \$2.25 at 2.75. Bulls and Oxen.—Export weight bulls, fat and smooth, \$3.85 at 4.00; good fat smooth handy weight butcher bulls, \$3.65 at 3.80; fair to good sausage bulls, \$3.40 at 3.65; thin, old common to extra, \$3.10 at 3.25; stock bulls common to extra, \$2.75 at 3.25; fat, smooth, young oxen to good lots fit for export, \$4.15 at 4.40; fair to fairly good, partly fattened young oxen, \$3.50 at 4.00; old, common and poor oxen, \$2.50 at 3.50. Native Stockers and Feeders.—Feeding steers, good style weight and extra quality, \$3.90 at 4.25; feeding steers common to only fair quality, \$3.60 at 3.80; good quality yearling stock steers and calves, \$4.00 at 4.35; stock heifers common to choice, \$3.10 at 3.50; stock steers, cull grades and throw outs, \$3.00 at 3.25.

The market on Thursday ruled active and stronger under light receipts and good demand. All offered were sold at outside prices.

Sheep.—Receipts of sheep and lambs on Monday last were 7,800, as compared with 7,400 the previous week. Shipments were 5,200, as compared with 5,600 the previous week. The market ruled active and higher for lambs, while sheep were slow except for strictly good handy weights, for which prices were only steady. Choice to extra lambs sold up to \$4.75 at 5.00; fair to good, \$4.40 at 4.65, and heavy yearlings at \$4.00 at 4.55. In sheep, good to fancy mixed at \$4.50 at 4.75, and fair to good ewes at \$3.50 at 4.25. Fair to extra spring lambs sold at \$4.75 at 5.00 per cwt. The best Michigan spring lambs sold at a range of \$6.65, and only one bunch from Ohio sold above these figures. Since Monday receipts have been very light, and the market has ruled strong at an advance on some grades. Quotations on Thursday closed as follows: Yearling Lambs.—Choice to extra selected, \$4.75 at 5.00; fair to good, \$4.40 at 4.65; culls and common grassy, \$3.50 at 4.25; heavy yearlings, \$4.40 at 4.65. Native Sheep.—Good to fancy mixed, \$4.55 at 4.75; good to extra mixed, \$4.50 at 4.80; fair, roughish to good ewes, \$3.50 at 4.40; common grassy culls, \$2.25 at 3.00. Spring Lambs.—Choice to extra ewes and wethers, \$5.50 at 6.75; coarse fat bucky to good lots, \$5.50 at 6.75; culls to fair, \$4.25 at 5.00; grassy thin culls, \$3.25 at 4.00.

On Thursday the market ruled strong to higher; top lambs sold at \$6.50 at 6.75; top sheep, \$4.00 at 4.55, closing firm.

Hogs.—Receipts of hogs on Monday were 18,810, as compared with 16,530 for the same day last week. Shipments were 11,020 as compared with 12,350 for the same day last week. The market ruled strong and higher on Monday, the advance being 5c to 10c, and closed firm. The range of prices was from \$4.64 at 4.75 for good to choice hogs, medium weights of 210 to 260 lbs. bringing the latter price. A few extra heavy weights sold at \$4.20. Light grassy hogs were slow of sale and weak. Wednesday the demand was fairly active for light grades and Yorkers, but light for the medium and heavy grades. Most grades were about 5c lower than on Tuesday. Quotations were as follows: Prime light Yorkers, \$4.05 at 4.10; mixed packers' grades, \$4.10; medium weights, 210 to 240 lbs., \$4.06 at 4.12; heavy hogs, 250 to 300 lbs., \$4.15; roughs, common to good, \$3.35 at 3.65; stages, common to choice, \$2.75 at 3.15; pigs, good to choice, \$3.90 at 4.00; pigs, skips, common to fair, \$2.75 at 3.75.

Thursday the market was active and higher; Yorkers, good, \$4.15; grassy, \$4.05 at 4.10; others, \$4.15 at 4.20; pigs, \$3.85 at 4.05. All sold, closing firm.

THE CHICAGO MARKET.

Chicago, August 11, 1898.

Cattle.—The receipts of cattle in this market last week were 42,167 head, and the shipments were 15,925. On Monday there was a good export shipping and local demand for dry-fed ripe fat cattle of all weights, and such sold from strong to 5c to 10c higher—extra fine lot making as high as \$5.65. The plain, fat cattle were only steady, while the medium, grassy, and half to three-quarter fat steers dragged at weak quotations, in many instances sellers granting concessions in order to attract an outlet. As for some time past, handy butcher stock sold steady, inclining to strength, while the medium "slippery" and culling weights were hard to sell at figures that looked extremely weak, or 25c to 30c lower than a few weeks ago. Stockers and feeding cattle were scarce, and again stronger, values showing a 25c to 30c advance over quotations of week before last. The extreme range on steers was \$4.45 at 5.60; heifers, \$2.75 at 4.75; cows, \$2.15 at 4.40; stockers, \$3.25 at 4.60. Since Monday values have held steady, with a fairly active market. Quotations on Wednesday were as follows: Choice steers, \$5.25 at 5.65; medium, \$4.90 at 5.20; beef steers, \$4.00 at 4.75; stockers and feeders, \$3.25 at 4.75; bulls \$2.60 at 4.25; cows and heifers, \$3.70 at 4.25; calves, \$3.50 at 7.00; western rangers, \$3.00 at 4.50; Texans, \$2.25 at 3.90.

Thursday the market was steady to stronger. Steers sold at a range of \$4.15 to \$5.60; cows and heifers, \$2.20 at 4.60; Texas steers, \$3.20 at 4.30; westerns, \$3.60 at 4.60; stockers and feeders, \$3.20 at 4.80.

Sheep.—The receipts in this market last week were 54,444, and the shipments were 3,830. The market on Monday opened active and strong. Choice lambs sold up to \$6.65, fair to good Wisconsin at \$4.25 at 4.65, and western lambs up to \$6.25. Buyers generally accepted loads without sorting. Western sheep showed a little strength, while natives ruled firm. Included in the western sales of sheep were lots at \$3.85, \$3.90 and \$4.15. The market finished firm, with the pens well cleared. Tuesday the market held about steady. Wednesday there was a good demand from butchers for sheep, but spring lambs were in light inquiry and sold lower. Quotations were as follows: Native sheep \$3.25 at 4.75; western rangers, \$3.50 at 4.65; spring lambs sold at \$4.00 at 4.25 for the poorest and at \$6.00 at 6.50 for the best flocks; western lambs, \$4.40 at 4.65; good yearlings \$5.00.

Thursday the sheep market was quiet, steady and unchanged.

Hogs.—Receipts in this market the past week were 129,835 head, and the shipments were 27,846. The market on Monday opened 5c to 10c higher, but closed weak, with a downward tendency on everything except top qualities. Packers were not

buying many hogs, and eastern shippers thought prices too high. Sales to shippers of butchers' and prime hogs were generally at \$4.00, ranging from \$3.95 to \$4.05—a few \$4.10. Packers paid \$3.90 at 4.00 for good quality heavy packers and mixed, and \$3.65 at 3.80 for rough, poor mixed and grassy hogs. Light sold largely at \$3.50 at 3.97½ for assorted lots, \$3.65 at 3.85 for light weight, and \$3.75 at 3.90 for mixed pigs, and light little pigs \$3.25 at 3.40, and strong fancy light up to \$4.00. Tuesday there was a decline in prices, a part of which was regained Wednesday, when the market ruled active at the advance. Quotations were as follows: Fair to choice, \$3.82½ at 4.00; packers, \$3.50 at 3.80; butchers, \$3.65 at 3.95; mixed, \$3.00 at 3.90; light, \$3.60 at 3.80; pigs, \$2.80 at 3.75.

Thursday the market was active and 5c to 10c higher; light, \$3.60 at 3.97½; mixed, \$3.65 at 4.00; heavy, \$3.65 at 4.05; rough, \$3.65 at 3.75.

STATE CROP REPORT FOR AUGUST.

The average yield of wheat per acre, as estimated by correspondents this month, is for the State 17.96 bushels; southern counties, 18.16 bushels; central counties, 17.93 bushels; and northern counties, 15.57 bushels. Compared with July 1 there is an increase of 1.22 bushels in the State, of 1.59 bushels in the southern counties, and of 0.55 bushels in the central counties, and a decrease of about one-half bushel in the northern counties. The figures point to a crop of about 30,700,000 bushels. This is more than ever returned in the Farm Statistics except in 1879, when the total yield was 30,983,340 bushels, and in 1882 when it was 25,568,688 bushels. The acreage in 1882 was 1,688,239 acres, and average per acre 19.29 bushels. The highest average yield per acre for the entire State of which we have record is 19.91 bushels in 1885. That year it was 20.28 bushels in the southern counties. The largest acreage ever reported was in 1880, 1,768,475 acres. The crop has been secured in fine condition and is of excellent quality. In answer to question as to quality 590 correspondents answer good, 91 average, and 5 bad.

The number of bushels of wheat reported marketed in July is 542,264 as compared with 665,294 reported marketed in July, 1897, and the amount marketed in the twelve months, August to July, is 17,164,925 bushels as compared with 10,130,876 bushels in the same months last year.

Horticultural.

OVER-PRODUCTION IN FRUIT.

This is a subject which has great interest to the fruit-growers of Michigan at the present time. In fact no other subject can be so important, for upon a thorough understanding and solution of this difficulty depends, in a great measure, the future success of the thousands who are engaged in the industry. This season large plantations of strawberries, grown at much expense, have been entirely abandoned, as the market price was not sufficient to pay cost of packages, picking, packing, freights, commissions, etc., and leave anything for the owner. Many acres were plowed up, and will never be planted to this crop again. The raspberry season, now about closing, must also have proven a disappointment to growers, judging by the prices being paid for them in the principal markets. This may be a good thing for consumers, but it is ruinous to growers.

We notice that Prof. L. H. Bailey, of Cornell University, a former resident of this State, and a graduate of the Michigan Agricultural College, has been discussing this subject at a meeting of the New Jersey Horticultural Society, under the head of "The Problem of Over-production." We quote a part of what the Professor said:

"Over-production means producing more of any product than the people within the range of its distribution can consume. Statistics can't indicate over-production unless they also consider the matter of transportation. That is, over-production as an economic fact is relative, not absolute. Among the remedies is increased consumption. The cheaper the product, however, the greater is the consumption, but an over-production in one year may increase the demand for many subsequent years. The big apple crop of 1896 was sold in great numbers abroad and this year there is a great demand for American apples. The less perishable the product the less is the danger of over-production in any year; but, on the other hand, the accumulation of the product may tend to restrict production. The greater the ease in raising a crop the greater the danger of over-production. Staples should be grown on cheap lands in large quantities and with the aid of labor-saving machinery. In proportion to the skill required in growing a crop, do the products fail or succeed on the general market. Special products are coming more and more in demand with the progress of civilization, especially in the cities. We must grow those things which can be shipped cheaply to a market. One man's labor can raise wheat to support 100 persons, but he can't raise more than five bushels of hot-house strawberries. Co-operative societies are successful only for the staples or the large area products, not for specialties. The grower should be paid only for the final product, not for the goods he delivers. Just the same as the dairyman is paid for the quality, and not the quantity of milk sold to creameries. The time is probably coming when the government will have officers to give definite advice in regard to markets. While we deplore the depopulation of rural communities, we forget that every person who leaves the farm ceases to be a producer and becomes a consumer, thereby extending the market for agricultural produce."

There is much in what the Professor says worthy of study not only by fruit-growers but farmers generally. He thinks transportation has to be taken into consideration when the question of over-production is being discussed. Certainly it should. But the strawberry growers of the Michigan fruit belt have the best and cheapest transportation to one of the greatest distributing markets in the world, yet they could not afford to pick and market their crop. Besides transportation the question of the cost of labor, the value of the land upon which the crop is grown, the cost of fertilizers, etc., must all be taken into account. It will be well, therefore, for the person who is thinking of going into the business of fruit-growing, to take all subjects relating to the cost of everything which enters into the production of the crop, into careful consideration before he decides the question in the affirmative. We believe the safest plan in fruit-growing, as in all other

lines of production, is to keep well within the limits of what the owner can handle, with the assistance of his own family. The anxiety to produce enormous crops, and make money fast, is responsible for a great many failures. The homely adage not to "bite off more than you can chew" is especially applicable to fruit-growing. There will be no over-production if this plan is generally practiced, and no plantations abandoned because of the cost of labor.

For The Michigan Farmer.

OUR GARDEN.

TOMATOES.

Tomatoes are one of the vegetables in our garden that we appreciate as well as any one thing that grows therein. They come after the most of other garden truck has gone, and furnish many a palatable dish that nothing else can replace. One great trouble has always been with the late tomato; they do not ripen early enough in sufficient quantity for canning purposes. We have always suffered the loss of many green ones before we had secured all that we would have liked for canning. To overcome this we set out about twice the usual number of plants this spring, and it looks now as though we would not want for ripe tomatoes this fall. We thought if a few plants would mature partly enough plants for our use that a "double dose" would mature the required amount.

So far as the cultivation is concerned the tomato requires no more than the average field corn. We cultivate our garden with a two-horse cultivator just the same as we do our potatoes and corn. There is a little pest, the "tomato worm," that gives us considerable trouble. It is the same color as the tomato vine, which makes it very hard to locate. During the middle of the day it seeks its way down into the thickest of the vines or leaves and lays idle. Along about the middle of the afternoon you will notice it making its way out on the tender branches and before the sun goes down it is eating for dear life. Whether it would continue its destructive work if left till morning I do not know, for I always kill them just as soon as I find them. From the size of some of them, I believe they eat all night and during the cool of the morning. The early morning is a fine time to kill them, for the vines plainly show where they have spent the night in feasting. I have made a careful examination of the vines, but have been unable to locate where these worms come from. I have found them not over three-eighths of an inch in length and not any larger than a common needle in size. Often I have found little holes in the ground close to the stem, but digging into the ground discloses nothing. Sometimes they will eat the tomatoes a little when they take a notion to—which I presume is done during the heat of the day, when hunger overtakes them in their concealment among the vines and leaves. They have a horn for a tail and look like the d—l. The best way I have found to kill them is to take a sharp garden hoe in one hand and a short stick in the other. Hold the sharp part of the hoe on the under side of the worm and strike with the other hand or stick on top of the worm. This makes two worms of one, but no damage is ever experienced from them afterwards.

Some farmers make a great mistake in the spring when setting out tomato plants by not getting them in the ground deep enough. It pays to buy large plants and then set them in the ground eight or ten inches. In a dry season they will thrive much better when so set and in a wet one it does not make any difference. The ground can not be too rich in available plant food to get a good crop of well developed tomatoes. Most always about this time of year (August 1) you will notice a few of the tomatoes beginning to rot. All such ones should be picked off and thrown away before they sap out the juice that might just as well go into a perfect tomato. A good, well ripened tomato is not only a beautiful thing to look upon, but an excellent thing to sharpen the appetite when one feels a little off. But the eating of the fruit is not the only luxury connected with this plant. I enjoy going out into the garden and watching things grow, not only the tomato, but other stuff as well. Then everything seems to taste so much better when we

can go out into the garden and get a mess of peas, beans, lettuce or onions, or many other good things that space does not allow me to mention, but just what all good gardens contain.

POTATO-BUG DESTROYER

The old-time potato-bug destroyer is putting in its appearance again this summer. I first noticed it early in the spring, but said nothing about it till it became generally known through this section. All the work I have seen it do is to eat the potato bug's eggs. This new bug (for it is new to me), has a long, sharp bill, and is very quick. This bill comes very handy when the potato-bug eggs are gone, so says a neighbor, for it is then that it looks for the bug itself. When it once finds the potato bug it thrusts its bill through the vital parts and sucks out the blood, which causes death almost instantly. If the time ever comes when these "new" bugs get as numerous as their enemy, the potato bug, then I believe they will completely destroy them. Let us hope that this day is not far distant.

I notice when traveling through the country that most all early gardens are growing up to weeds. These weeds should not be allowed to go to seed and scatter over the surface of the soil or be carried away by the wind to a new field. If they are already ripe they can be cut some morning after there has been a dew without much danger of scattering the seed. One object of the early garden is to have the soil free from weeds and there is no better way to keep them out than to keep up a course of cultivation of some kind. The best authority we have claims that constant cultivation produces soluble plant food, which if true will be a good thing for farmers to bear in mind whose gardens are not just what they would like them to be.

Hillsdale Co., Mich. ELIAS F. BROWN.

For The Michigan Farmer.

FIGHTING THE CUTWORMS.

The cutworms have been unusually prolific this season in the gardens and fields, and they have done so much damage in some localities that crops have had to be half planted over again. Cucumbers, cauliflowers and cabbage have suffered the most, although they have also appeared in the cornfields, doing more or less damage to the young corn. In many respects the cutworm has proved the worst nuisance that farmers have had to contend with. Tobacco dust, and other sprays have been repeatedly directed at them, but this has only partially allayed the trouble.

There seems to be several species of these disgusting pests, but it is difficult to tell which does the greatest amount of damage. Digging them out, and hunting for them through the rows of vegetables is a slow and laborious work, but it proves effective if pursued persistently.

I have tried with marked success a method that may be new to some, and probably old to others. This is to set a poisoned bait for them. First I tried clover. As a rule the cutworms prefer good, green clover to most of the garden vegetables, and they will even leave the plants to eat the clover cut and spread around them. By dipping the green clover in strong Paris green solutions, and spreading it around the plants the cutworms are killed by the scores.

But even better than this is a bait composed of bran mash, moistened with water. To every four parts of bran mash is added one part of sugar and one part of arsenic. This is thoroughly mixed up, and moistened with a little water. Then it is distributed close around the plants late in the afternoon or early in the evening. The cutworms will then eat the mash in preference to the plants, and if the operation is repeated every other day for a week or ten days the field will be pretty well cleaned of cutworms. This is much easier and more satisfactory than digging out the worms.

New York. C. W. JONES.

HORTICULTURAL NOTES.

California's peach crop will be light this season, and the output of the canning factories will be small in consequence.

It is much easier, says the American Cultivator, to keep the borer out of a fruit tree than to get him out after he has begun his work. The eggs are laid all through the months of June and July. If the tree trunk is washed

with an emulsion containing dilute carbolic acid it will be effectually protected. If the borer is already in and has begun his work, a stout wire with a sharp point but somewhat roughened at the end will not only kill him, but bring him out. When the borer is removed, put some grafting wax on the hole he has made, and the bark will quickly grow over the injured place.

Michigan's apple crop will not be more than 75 per cent of an average in quantity, and we doubt if the quality will be very good. It looks as if good apples would be scarce, and bring a high price.

A Russian botanist is reported to have been successful in cultivating black roses. What special purpose a black rose will find is a problem for that botanist to solve. It will be as paradoxical as a white blackbird.

Meehan's Monthly says it is difficult to get people to understand that trees can die from drowning just as animals can. It refers to the case of a Boston correspondent, who says he in the spring moved two large horse chestnuts with the greatest care but they died. In the fall an examination was made and the holes were found to be full of water within one foot of the surface of the ground. The holes were really flower-pots without the necessary holes in the bottom to allow the water to escape. There can be no better lesson in gardening than to be continually remembering why it is necessary to have a hole in a flower-pot.

"I DO MY OWN WORK."

So Says Mrs. Mary Rochiette of Linden, New Jersey, in this Letter to Mrs. Pinkham.

"I was bothered with a flow which would be quite annoying at times, and at others would almost stop.

"I used prescriptions given me by my physician, but the same state of affairs continued.

"After a time I was taken with a flooding, that I was obliged to keep my bed. Finally, in despair, I gave up my doctor, and began taking your medicine, and have certainly been greatly benefited by its use.

"Lydia E. Pinkham's Vegetable Compound has indeed been a friend to me.

"I am now able to do my own work, thanks to your wonderful medicine. I was as near death I believe as I could be, so weak that my pulse scarcely beat and my heart had almost given out. I could not have stood it one week more, I am sure. I never thought I would be so grateful to any medicine.

"I shall use my influence with any one suffering as I did, to have them use Lydia E. Pinkham's Vegetable Compound."

Every woman that is puzzled about her condition should secure the sympathetic advice of a woman who understands. Write to Mrs. Pinkham at Lynn, Mass., and tell her your ills.

For the best in the nursery line, both in FRUITS AND ORNAMENTALS and at prices to suit the times, consult THE STORRS & HARRISON CO., Box 10, Painesville, Ohio. Correspondence Solicited. Catalogues free.

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Farmers' Clubs.

CONDUCTED BY A. C. BIRD.

All correspondence for this department should be addressed to A. C. Bird, Highland, Mich.

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All communications relating to the organization of new clubs should be addressed to C. M. Pierce, Elva, Mich.

AGAIN READY FOR BUSINESS.

Every farmers' club worker in Michigan will rejoice at the announcement made elsewhere that The Farmer is once more in a home of its own. This means that after this issue this department will again be in a position to welcome reports from every farmers' club in the State. We have none but words of the deepest appreciation for our more than two hundred correspondents who have so patiently borne the handicap of the past eight weeks. Not one complaint has been received at this office and the letters of sympathy for The Farmer in its misfortune have reached nearly the hundred mark. The farmers' club people of Michigan have not forgotten the great work done for them by the Lawrence Publishing Co. in establishing the Farmers' Clubs Department in The Michigan Farmer. They have not forgotten that neither time, money nor energy have been spared by the publishers in building up the farmers' club work through the medium of these pages. And now that The Farmer is once more in position to merit activity on the part of its friends we hesitate not to affirm from our knowledge of the facts in the case that from every farmers' club located in Michigan will come a subscription list that will demonstrate to the publishers that farmers' club people have long and grateful memories of the generous treatment they have received.

LET IT NOT BE FORGOTTEN.

Let it not be forgotten that every school district in Michigan should take action at the coming annual meeting with reference to the proposed uniformity of text books. If no action is taken previous to Jan. 1st, 1899, the act will become operative regardless of any succeeding action on the part of the districts. Any district not desiring to come thereunder must decide to that effect by a majority vote of all the electors in the district. A majority vote of those present is not sufficient, unless that vote includes more than half the voters in the entire district.

When it is remembered that rarely are ten per cent of the qualified voters of a district present at the annual meeting the magnitude of the task ahead of those who would defeat the application of the measure to their district will be appreciated. It will be exceedingly difficult to get a sufficient number to act adversely on the measure out to the annual meeting, even though all are agreed as to its undesirability.

An honest difference of opinion exists as to the merits of the law as passed, but whether the sentiment of the community be for or against the measure, a fair and dispassionate consideration should be given it in every district in the State. Whether adopted or rejected it should be acted upon understandingly, and this can only be done after careful study and thorough discussion. The act in question appears in its entirety in The Farmer of July 30th, on page 74.

ANNUAL PICNICS.

JACKSON CO.
The South Leoni Farmers' Club, together with the West Leoni and East Blackman Club, united in a picnic at "The Cove," Gillett's lake, on the third Friday of July. At the business portion of the meeting a resolution was passed to unite in an annual meeting at the same place on the fourth Friday of the month.

MRS. A. R. CLEMENT, Sec'y.
OAKLAND CO.

The Highland and Hartland Farmers' Club held its annual picnic on the banks of Maxfield Lake, July 30th. Although it threatened, in the morning, to be a rainy day a large crowd was

present. After the usual bountiful picnic dinner a very interesting program was carried out which was opened with prayer by Rev. Atchinson and remarks by our president, W. I. Cook. Then followed recitations by Miss Edith Lockwood and S. T. Morse, and music by the male quartet, mixed quartet and Hartland orchestra. The Hartland band was present and furnished music throughout the day, which was greatly enjoyed by everyone.

We listened with much pleasure to our former Association president, J. T. Daniels, who spoke of the farmers' clubs, their work, and the moral, social, intellectual, and financial benefits received therefrom. Rev. Easter then gave us a most interesting talk on the methods of farming in pioneer days and of some of the crude means now used in foreign countries, and also touched on several of the current topics.

This picnic was one of the most successful our club has ever held and the people returned to their homes feeling that the day had been pleasantly and profitably spent.

SYLVIA I. GAUNT, Cor. Sec.

REPORTS FROM LOCAL CLUBS.

BLISSFIELD FARMERS' CLUB.

Club met at the home of Cicero Torrey, July 13. Subject, "Should farmers sell their crops as soon as harvested?" A number of interesting talks were given, but there was not enough difference of opinion to make much discussion. The leader, J. W. Brown, thought it best to sell at once, if the price was good enough to give a fair profit, but if all the wheat was sold as soon as harvested the market would be glutted. If one crop should fail and all of the last year's yield had been sold and shipped to other countries, it would create a shortage at home. It costs about 73 cents to raise a bushel of wheat and it is not very profitable to sell at 74 cents. Mr. Crane thought it pretty hard for the farmer to tell just when to sell. "Believed he should watch the market reports and be a good financier, as well as the merchant or any other business man. Mr. Clement, one of the oldest farmers in the club, said, "When grain brings a price that will pay for the labor of raising it, and a good margin, it is a good time to sell. You thus avoid losses from storing. Farmers should watch and read the market reports of the world. If there is likely to be a shortage, and the price is up, then sell." Mr. Osborne said, with the war on our hands and no positive assurance of where or when it would end, he believed it to be the better policy for all who could afford to do so, to hold their wheat of this harvest. He felt sure of a better price. Mr. Austin thought it was all right for the man who was out of debt to hold his grain, but "if you are in debt, sell as soon as possible." All agreed that the price and market reports should be a guide, and the crops sold whenever they would bring the best return to the farmer.

MRS. JOHN LETTER, Cor. Sec.
Lenawee Co.

PARMA FARMERS' CLUB.

Friday, July 1st, through the kindness of Mr. and Mrs. Fred Harrington, the spacious house and grounds of Mr. and Mrs. Myron Clark were opened for the benefit of the Parma Farmers' Club. The courtesy of the gentlemen had placed this July meeting in the hands of the ladies. The program was a marked success, and largely patriotic. It was to be regretted that no more gentlemen were present. J. Sheridan Knowles says, "Woman acts her part, when they do but make their ordered households." We all endorse this, still claiming broader views. Club was called to order with Miss Minnie Horton in the chair. Mrs. Phillips presided at the piano, club singing America. Invocation, Rev. D. Cronk. Mrs. Horton's paper, "Uncle Sam's kindness to Cuba." Both Cuba and other foreign powers are receiving blessings from his hands, and while his deference is shown to others, the right of representation will sometime be granted to the mothers of the soldier and sailor. Discussion; Rev. Cronk and E. W. Campbell expressed their willingness that woman should use the ballot. E. Miller thought woman too easily influenced by a new dress. Mrs. Showerman expressed the sentiment of every woman present by saying, "Woman has a principle to do right." Paper, "Music and Flowers," Mrs. Dr. Hubbard. Both benefit the farmer physically and morally; a rose or a strain of

music recalls the wanderer, while the price of a bushel of wheat or oats awakens no home desire. Discussion. Paper by Mrs. Rinker, subject "Liberty." Liberty begets magnanimity, position and power. We are patriotic and proud of our stars and stripes. A cry for liberty has gone out in this 1898. This paper was complete in itself. Reading, "Old Fashioned Mothers," Mrs. Southwell. They held their woman's congress at home and never spoke at a W. C. T. U. We all know their star is fixed and bright, while the new woman, as the meteor, shines and is gone. The program was complete and none failed to respond. Miss Horton was witness of woman's ability to preside in congress. Invitation was accepted to join a union meeting at the Sandstone town house with Sandstone and Blackman clubs Aug. 2d. Mr. and Mrs. Chapple were voted in as new members of Parma Club.

MRS. B. L. HUBERT, Rep. pro tem.

SOUTH JACKSON FARMERS' CLUB.

At the July meeting held at the home of Mrs. Wm. Dancer, the following resolutions were adopted:

Resolved, That we are in favor of the enactment and enforcement of a prohibitory law, forbidding the manufacturing, selling or using of any spirituous liquors or other intoxicating drinks except for medicine or medical purposes.

Resolved, That until such a law can be passed by a majority vote of a township, village, city, county, state or the nation we favor the most restricted regulation law that can secure a majority vote.

Resolved, That until the passage of a more stringent law can be secured, we favor the strictest enforcement of the present liquor law.

A brief discussion of the Association topic resulted in the passage of the following resolution:

Resolved, That we will not support the nomination of Senator Campbell nor assist in his re-election.

It is understood, of course, that Mr. Campbell is sat down upon because he voted against railroad taxation.

The secretary was instructed to request the co-operation of the Hanover and Liberty Farmers' Clubs in holding a basket picnic at Round Lake, Aug. 25, and Pres. Strong was chosen a committee of one to confer with a like committee from the aforementioned clubs and make arrangements for the affair. A song by Miss Woodruff completed the program.

HELEN M. CARPENTER, Reporter.
Jackson Co.

UNION FARMERS' CLUB.

An out door meeting will be held in J. S. Dunks' grove on Aug. 11. Club work is prospering in this locality.

LILLIAN MCINTOSH, Cor. Sec.
Branch Co.

MAKE VACATION WEEKS VALUABLE.

J. T. DANIELLS, EX-PRES. STATE ASSOCIATION.

The custom of having a vacation for the club during the extremely busy and trying mid-summer months has become almost universal and results indicate the wisdom of so doing. Club work is re-engaged in with renewed zeal and with increased profit after the rush of farm and home work is passed. But this does not preclude the making of real advancement in club work during these vacation weeks. While the hand is busy with its labors, the mental faculties—being so much quicker than the physical—can find profitable employment in planning good things for the club, improved methods in club work and ways, which, when the club shall re-convene, will result most advantageously.

As a nation, we move fast. More time taken for reflection may be a most profitable use of the same. Let us, during vacation, carefully review and consider the work of the past. With all of its excellences there is, doubtless, abundant opportunities for improvement. Let us search for best methods and be fully determined on doing best work, and be satisfied with nothing less. What a responsibility rests upon us, one and all, to make the most and the best use of our opportunities—grand and glorious that they are—in these closing days of this 19th century.

The enjoyable custom of the farmers' club holding a picnic during the vacation time, either by itself with invited guests, or by the uniting of several adjacent clubs in one general jolly recreation (excuse the coinage) is to be most highly commended and encouraged. The picnic does work peculiarly its own (we are not referring to calls for the doctor) one phase of which is the attracting of the attention of those who, through necessity it may be, but more likely through "habit," are too busily employed in wearing themselves out and dwarfing their higher faculties, (all work and no play does make of Jack a dull old boy and the same course brings corresponding results to Jill, too,) to take time for recreation, which is, most truly, recreation.

The coming year is to be an important one in club work. Especially will this be true of the work devolving upon the State Association. Its success in the past in shaping public sentiment and in giving direction to public ways should encourage to wise, faithful and persistent effort during the months to come.

RHEUMATISM

Permanently cured by using DR. WHITEHALL'S RHEUMATIC CURE. The surest and the best. Sample sent free on mention of this publication. THE DR. WHITEHALL MEGRIMINE CO., South Bend, Indiana.

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Aug. 23, 1898

DON'T MISS THIS OPPORTUNITY TO SPEND A FEW DAYS AT THE NORTHERN RESORTS.

Very Low Rates

ARE OFFERED AND TICKETS WILL BE

GOOD UNTIL SEPT. 1st TO RETURN.

Train Time and Round Trip Rates.

Leave.	Special Train a.m.	Regular Train a.m.	Petoskey Charlevoix Trav. City.
Detroit (Fort St. Sta.)	7:30	7:30	\$5 00
Delray	7:40	7:40	5 00
Beech	8:30	8:30	5 00
Elm	8:35	8:35	5 00
Stark	8:38	8:38	5 00
Plymouth	8:45	8:45	5 00
Salem	9:01	9:01	5 00
South Lyon	8:50	8:50	5 00
Brighton	8:55	8:55	5 00
Howell Junction	9:42	9:42	4 75
Howell	9:45	9:45	4 75
Fowlerville	9:37	9:37	4 50
Webberville	9:47	9:47	4 50
Williamston	10:00	10:00	4 50
Meridian	10:30	10:30	4 50
Okemos	10:36	10:36	4 25
Trowbridge	10:41	10:41	4 00
Lansing	10:25	10:25	4 00
North Lansing	10:35	10:35	4 00
Delta	11:04	11:04	4 00
Ionia	7:30	7:30	4 00
Lyons	7:40	7:40	4 00
Collins	7:46	7:46	4 00
Portland	7:56	7:56	4 00
Eagle	8:19	8:19	4 00
Grand Ledge	11:00	11:00	4 00
Mulliken	11:33	11:33	4 00
Sunfield	11:41	11:41	4 00
Woodbury	11:48	11:48	4 00
Lake Odessa	11:35	11:35	4 00
Clarksville	12:06	12:06	4 00
Lowell (L. & H. R. R.)	11:50	11:50	4 00
Elmdale	12:13	12:13	4 00
Alto	12:19	12:19	4 00
McCords	12:25	12:25	4 00
East Paris	12:25	12:25	4 00
Grand Rap.	arrive 12:30 p.m.	12:55 p.m.	

*Stop on signal.

SPECIAL TRAIN WILL LEAVE GRAND RAPIDS at 1:15 p.m. Arrive Traverse City 6:00 p.m. Leave at 6:15 p.m. Arrive Charlevoix about 8:30, Petoskey 9:00 and Bay View 9:10 p.m.

RETURN LIMIT SEPT. 1st.

Stops will be made at principal stations north of Manistee Crossing to let off passengers who do not wish to go through. Baggage will be checked to such points.

J. K. V. AGNEW,
Gen'l. Supt.

GEO. DeHAVEN,
Gen'l. Pass. Agt.

APPLES FOR THE FAR NORTH.

Those of our readers in the northern peninsula who are interested in orcharding, will find some suggestions of value in a bulletin recently issued by the Vermont Agricultural Experiment Station, from which we take the following extracts:

The limit of successful apple culture has been moving steadily northward ever since the occupation of this country. Factors in this progress have been the planting of crab apples, the introduction of the Russian varieties, and especially the selection of native hardy seedlings and the adoption of better orchard practice.

Any given variety, more or less sensitive to cold, can be grown from 50 to 150 miles north of its natural limit by reasonable precautions, such as the following:

1. Plant on land sloping south or southeast and furnish good wind-breaks to the north.
2. Secure thorough natural drainage by choosing moderately high and sloping land.
3. Secure thorough atmospheric drainage. If the subsoil is not porous enough to carry off all extra water it must be underdrained.
4. Buy trees of hardy stocks. In most grafted or budded trees the character of the stock is wholly unknown, but to grow a given variety at its northernmost limit a perfectly hardy stock is required.
5. Graft the chosen variety in the tops of very hardy trees.

Varieties recommended for planting where hardness is a principal consideration are Yellow Transparent, Red Astrachan, Longfield, Oldenburg, Fameuse, McIntosh, Wealthy, Scott Winter, Pewaukee, Artis.

The United States Investor is authority for the statement that sales of bonds during the month of July amounted to \$10,596,319, not including temporary loans. Of the above amount, \$7,849,179 were issued by various cities and towns, \$1,797,140 by counties, and \$950,000 by states. This amount shows an increase of \$4,991,637 over the \$5,604,682 reported for the month of June, and a decrease of \$8,884,989.27 from the \$19,481,308.27 reported for the month of July, 1897. Even with the sale of such a large amount of bonds money for investment was never more plenty than at the present time.

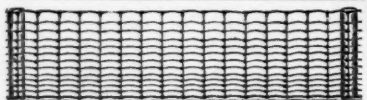
A Russian named Yehonda publishes an agricultural paper in Jerusalem. That paper is certainly in a country where it is much needed, for agricultural methods have not improved there since the days of Abraham, Isaac and Jacob. Large portions of what was once a very fertile country are now practically worthless for agricultural purposes. The inhabitants, quite generally, are not much better than the land, and Yehonda will have to hustle to keep up his circulation.

Popular Week-End Excursion Via Michigan Central to Grand Rapids, Kalamazoo and Three Rivers.

On Saturday, Aug. 20th, Special Excursion train will leave Michigan Central Station at 7:30 a.m. for the above points. Only \$2.00 for the round trip. Tickets good for return until first train Monday, Aug. 22d.

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THE WILLMARTH FENCE MACHINE.
PRICE ONLY \$3.50.
Why buy a cat in a bag when you can have the best machine on the market sent you by express c. o. d. on 10 days' trial and if not satisfactory the express agent will refund your money. Address WILLMARTH FENCE MACHINE CO., Detroit, Mich.



Returned to Spain.

She takes back her vanquished soldiers. We never took back a rod of Page Fence after a siege. They order more instead.
PAGE WOVEN WIRE FENCE CO., Adrian, Mich.



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STAR DRILLING MACHINES are far superior to others. They are stronger, faster and easier to operate. Made in ten sizes. We also have a full line of supplies. CATALOGUE FREE. **Star Drilling Machine Co., Akron, O.**

WELLS

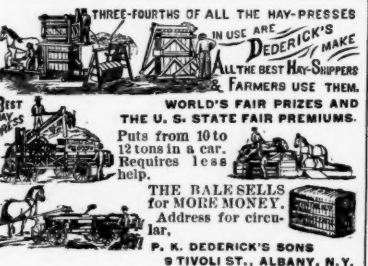
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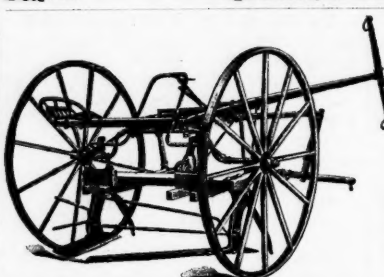


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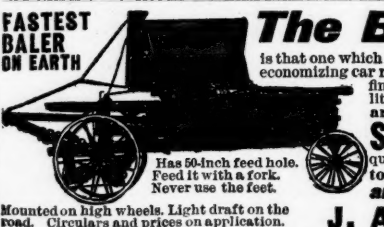
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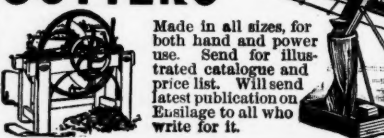
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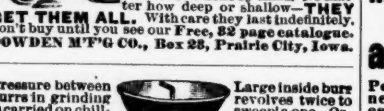
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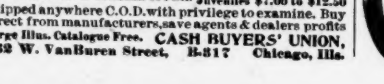


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